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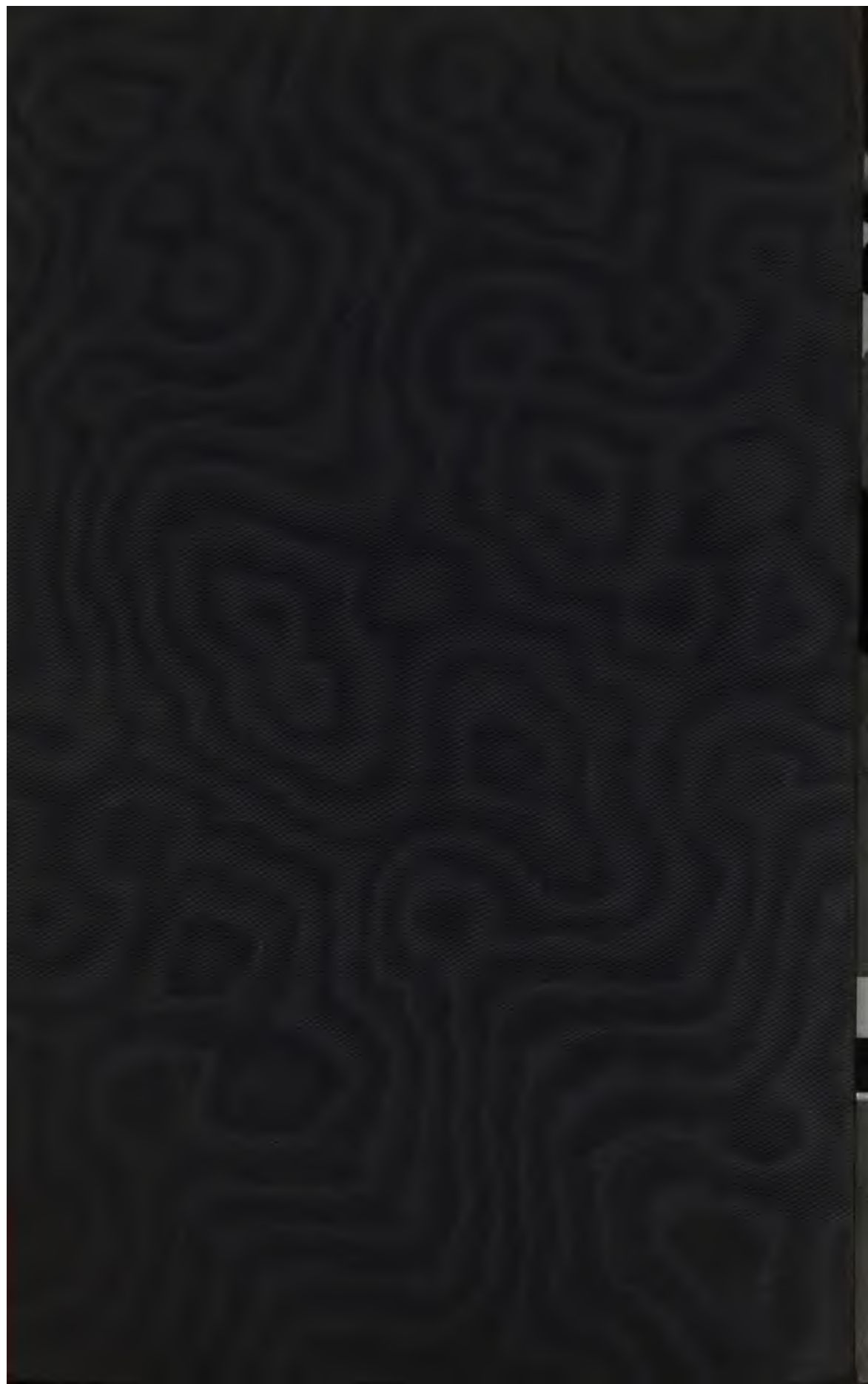
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OBSERVATIONS
ON THE
STATE OF MORTALITY & SICKNESS

EXISTING AMONGST
FRIENDLY SOCIETIES:

PARTICULARISED FOR
VARIOUS TRADES, OCCUPATIONS, & LOCALITIES.

WITH
A SERIES OF TABLES,

SHOWING
THE VALUE OF ANNUITIES, SICK GIFT, ASSURANCE FOR DEATH, AND
CONTRIBUTIONS TO BE PAID EQUIVALENT THERETO:

CALCULATED FROM
THE EXPERIENCE OF THE MEMBERS

COMPOSING
THE INDEPENDENT ORDER OF ODD FELLOWS, MANCHESTER
UNITY FRIENDLY SOCIETY,
A BODY OF THREE HUNDRED AND THIRTY-FIVE THOUSAND MEMBERS.

EDITION OF 1861.

BY HENRY RATCLIFFE,
CORRESPONDING SECRETARY.

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PREFACE.

IN the preparation of the Tables in this work, simplicity of structure has been chiefly aimed at, with the view to augment their practical value. Members of Friendly Societies are generally willing to adopt improvements in their financial arrangements, when they can be made clearly to perceive their necessity. But the subject is, in itself, an intricate one to those who have not devoted some special study to it, and this intricacy is increased rather than diminished, by a too close observance of technical formulæ, or technical expressions. The Tables published in 1850, by the Manchester Unity, have caused the attention of the more intelligent and earnest workers amongst the Members, to be directed to the question of Friendly Society finance, and the laws deduced from past experience, upon which it ought to be based to insure satisfactory results. The labours of others have, likewise added much to the stock of information on the subject, and have tended to popularize, to a considerable extent, the method of procedure by which past experience has been rendered available for future guidance.

Two new features have been introduced into the present work. Many Societies, and many branches of the large affiliated bodies adopt a gradually diminishing rate of sick allowance, according to the duration of any continued incapacity to follow the usual, or some other employment. The present values, etc., of these various reduced gifts are therefore given, and likewise the present value, and the contributions equivalent thereto, of a sick allowance and an insurance at death, when the gain to a Society from lapsed policies, including those resulting from Secessions and Expulsions, has been included in the calculations. Many objections have been made, and some of them of considerable weight, against the practice of periodically reducing the rate of sick allowance; but this is a question for philanthropists and the provident working men themselves to decide, and not the actuaries. To those conversant with the working of Friendly Societies, this practice is known to be the rule rather than the exception. It was therefore deemed advisable, that such information as could be derived from the Returns, should be given, in order that branches adopting the principle of a diminishing sick allowance, might be able to adjust their rate of in-payments in accordance with the results obtained from past experience, rather than by any arbitrary or hap-hazard method, which has, to a great extent, hitherto prevailed.

It is beyond dispute, that greater improvements have been made in the management of these Societies during the last fourteen years, than during the entire period from their formation to that time. Notwithstanding this most satisfactory state of things, it is a source of deep regret to find, that some Societies, after having adopted as a general law, a graduated rate of payment according to age at entrance, have been compelled to fall back upon the old exploded system of equal contributions, and a very inadequate graduated admission fee, or, at least, to leave the adoption of the improved scales optional with branches. But all permanent improvement is a work of time and diligent labour, and it is gratifying to know that such progress is being made as to justify the expectation, that eventually, a correct system of finance will become, in the estimation of all interested, the chief recommendation of any Provident Institution. The thanks of the Members of every Friendly Society are due to Mr. Hardwick, for the compilation of his popular "Manual;" which, besides conveying much useful information, has enabled parties, not possessed of the requisite technical knowledge, to understand more clearly the works of those who write for professional actuaries, and scientific enquirers, rather than for the instruction of the Members themselves.

It has been estimated that the expense incurred in obtaining, compiling, and publishing the information contained in the present volume, will amount to about £3,500. This certainly must be regarded as a satisfactory proof that a strong desire exists amongst the Members of the Manchester Unity, at least, to obtain such information as will enable them to place their Lodges in a satisfactory position. This sum has not been abstracted from the funds set apart for relief during sickness, for an assurance at death, or for providing for the necessitous widows and orphans, but from the management fund of the Lodges; funds which being generally raised by direct levy on the Members, are not therefore readily expended without careful consideration on the part of those most interested in the character and welfare of their cherished Institution.

MANCHESTER, *May 5th*, 1862.

ERRATA.

- Page 29, eighth line, *after the word city, insert the word one.*
 „ 38, last line but six, *in place of 7.2, read 5.76.*
 „ 49, last paragraph but one, *omit with the exception of age 50.*
 „ 53, heading to first Table, *omit the word WITH.*

CONTENTS.

	PAGE
Vitality of England and Wales, and Rate of Mortality, from Returns sent to Registrar of Friendly Societies	9-14

Table 1. English Life Table: Males	11
„ 2. Mean after life-time: England and Wales	12
„ 3. Rate of Mortality: Mr. Finlaison's Tables	13

Duration of life in the Unity	14-31
---	-------

Table 4. Trades not classified, Rural Districts, Number at each Age— Deaths—Sickness	15
„ 5. Trades not classified, Town Districts, Number at each Age— Deaths—Sickness	17
„ 6. Trades not classified, City Districts, Number at each Age— Deaths—Sickness	18
„ 7. Trades not classified, Rural, Town, and City Districts: Number at each Age—Deaths—Sickness	20
„ 8. Trades not classified, Rural Districts, Living—Dying—Mortality per Cent.—Specific Intensity	22
„ 9. Trades not classified, Town Districts, Living—Dying—Mortality per Cent.—Specific Intensity	23
„ 10. Trades not classified, City Districts, Living—Dying—Mortality per Cent.—Specific Intensity	24
„ 11. Trades not classified, Rural, Town, and City Districts, Living— Dying—Mortality per Cent.—Specific Intensity	25
„ 12. Trades not classified, After life-time—Rural, Town, and City, and Rural, Town, and City combined	30

Average Sickness experienced in the Unity	32-38
---	-------

Table 13. Trades not classified, Average Sickness experienced in Rural, Town, and City Districts, and the three combined, from Mr. Finlaison	32
„ 14. Trades not classified, Average Sickness experienced in Rural, Town, and City Districts, and the three combined	34
Average Sickness—Mr. Finlaison—Manchester Unity, 1848-8— Manchester Unity, 1856-60	37

	PAGE
Duration of Life, and average Sickness in various Trades . . .	39

Table 15. Average Rate of Mortality, Decennial periods, Rural, Town, and City Districts combined, and various Trades . . .	40
„ 16. Average Sickness, Decennial periods, Rural, Town, and City Districts combined, and various Trades . . .	41
„ 17. Aggregate Sickness in periods—Rural, Town, and City Districts combined, and various Trades . . .	42
„ 18. Aggregate Sickness in other periods—Rural, Town, and City Districts combined, and various Trades . . .	43

Mortality and average Sickness in the following Trades 44–84

Bakers	44
Blacksmiths	44
Bricklayers	45
Butchers	45
Carpenters and Joiners	46
Clerks and Schoolmasters	46
Coopers	47
Dyers	48
Labourers, Town and City Districts	48
Labourers, Rural Districts	50
Mill Operatives	51
Miners and Colliers	51
Table 19. Value of Annuity—Manchester Unity—Miners and Colliers—and Miners and Colliers excluded . . .	54
„ 20. Value of Sick Gift—Manchester Unity—Miners and Colliers excluded . . .	55
„ 21. Value of an Assurance at Death—Manchester Unity—without Miners and Colliers—and Miners and Colliers . . .	56
„ 22. Annual Premium for Sick Allowance—with Miners and Colliers—and without Miners and Colliers . . .	57
„ 23. Annual Premium for an assurance at Death—Manchester Unity—Without Miners and Colliers—and Miners and Colliers . . .	57
„ 24. Miners and Colliers—Living—Dying—Mortality per Cent.—Specific Intensity	58
„ 25. Miners and Colliers—Value of Annuity—Sick Gift—Assurance at Death	59
„ 26. Miners and Colliers—Annual Premium for Sick Gift—Assurance at Death—Annuity after 70 years of age	60
Plumbers and Painters	61
Potters	62
Letter-Press Printers and Compositors	63
Sawyers	63
Servants	64
Shoemakers	64
Spinners	65
Stonemasons	66
Tailors	66
Watermen	67
Weavers	68
Wheelwrights	68
Woolcombers	69
Table 27. Selected Trades—Mortality and Sickness	70
„ 28. Bakers ditto	71
„ 29. Blacksmiths ditto	72
„ „ Bricklayers ditto	72

Mortality and average Sickness in the following Trades—*continued.*

Table 30.	Butchers	Mortality and Sickness	73
" "	Cabinet Makers	ditto	73
" 31.	Clerks	ditto	74
" "	Coopers	ditto	74
" 32.	Dyers	ditto	75
" "	Labourers, Rural	ditto	75
" 33.	Labourers, Town & City	ditto	76
" "	Miners	ditto	76
" 34.	Mill Operatives	ditto	77
" "	Plumbers	ditto	77
" 35.	Potters	ditto	78
" "	Printers	ditto	78
" 36.	Sawyers	ditto	79
" "	Servants	ditto	79
" 37.	Shoemakers	ditto	80
" "	Spinners	ditto	80
" 38.	Stonemasons	ditto	81
" "	Tailors	ditto	81
" 39.	Watermen	ditto	82
" "	Weavers	ditto	82
" 40.	Wheelwrights	ditto	83
" "	Woolcombers	ditto	83

Sickness during Periods of Time 84-92

Table 41.	Average Sickness—First six months—Third six months—First twelve months—Second twelve months—After two years	86
" 42.	Present Value Sick Gift—First six months—Second twelve months—After eighteen months	87
" 43.	Present Value Sick Gift—First twelve months—Fourth six months—After two years	88
" 44.	Present Value of Sick Gift—Third six months—Fourth six months—After eighteen months	89
" 45.	Annual Premium for Sick Gift—First six months—Third six months—First twelve months—Second twelve months—After two years	90
" 46.	Annual Premium payable for Sick Gift during Life	92

Secessions and Expulsions 92-101

Table 47.	Number of Secessions and Expulsions	94
" 48.	Living—Secessions and Mortality per Cent. at each Age	95
" 49.	Value of Sick Gift and Annuity, with Secessions	99
" 50.	Value of an Assurance at Death, with Secessions	99
" 51.	Value of Annuity with Secessions	100
" 52.	Annual Premium for Sick Allowance, and Annuity with Secessions	100
" 53.	Annual Premium for Assurance at Death with Secessions	101

Assurance on the Death of a Member's Wife 101-103

Table 54.	Present Value of Assurance at Wife's Death—Annual Premium payable during Member's Life—Annual Premium payable during both Lives	103
-----------	---	-----

	PAGE
Value of Annuities, Sick Gift, Assurance at Death, and Contributions payable for same	104
Value of Annuities	104
Value of Sick Allowance	107
Value of Deferred Annuities	109
Value of Assurance at Death	111
Value of Annuities payable more frequently than once in a year	112
Annual Contributions for Sick Gifts, Annuities, and Sum at Deaths	114
Table 55. Value of Annuities:—Rural—Town—and City Districts; and Rural, Town, and City combined	117
" 56. Present Value of Sick Gift to age 70—Rural—Town—and City; and Rural, Town, and City combined	119
" 57. Present Value of an Annuity after 70 years of Age—Rural—Town—and City; and Rural, Town, and City combined	120
" 58. Present Value for an Assurance at Death—Rural—Town—and City; and Rural, Town, and City combined	121
" 59. Annual Premium for Sick Gift to age 70—Rural—Town—and City; and Rural, Town, and City combined	122
" 60. Annual Premium for Annuity after age 70—Rural—Town—and City; and Rural, Town, and City combined	123
" 61. Annual Premium for an Assurance at Death—Rural—Town—and City; and Rural, Town, and City combined	124
" 62. Living—Dying—Mortality per Cent.—Specific Intensity—Rural, Town, and City Districts—Without Miners and Colliers	125
" 63. Present Value of Annuity—Sick Gift—Assurance at Death—Annuity after age 70—Rural, Town, and City Districts—Without Miners and Colliers	126
" 64. Annual Premium for Sick Allowance—Assurance at Death—Annuity after age 70—Rural, Town, and City Districts—Without Miners and Colliers	127

Valuation of Assets and Liabilities 128–131

Table 65. Valuation of Assets and Liabilities	130
---	-----

VITALITY OF ENGLAND AND WALES,

AND

RATE OF MORTALITY

EXPERIENCED BY MEMBERS OF FRIENDLY SOCIETIES, FROM
RETURNS SENT TO THE REGISTRAR OF FRIENDLY SOCIETIES.

In the year 1846, the Executive of the Independent Order of Oddfellows Manchester Unity Friendly Society requested that each Branch or Lodge of the Society should make a return of the number of Members good on the Books, their respective ages and trades, the deaths that took place, and the sickness experienced by each Member; and this being repeated for the following years of 1847-8, a fair amount of the experience of Members of Friendly Societies was obtained; the same being analyzed, the Rate of Mortality and average Sickness experienced by the Members was given: these results were published at the time, for the use of Members and any other persons desirous of purchasing the same.

At that time the fifth Report of the Registrar General had been published, giving a Table shewing the Rate of Mortality experienced by all classes of Society in England and Wales; and containing, as it did, a large mass of experience, was recalculated, beginning at age 18, and the results given, with the experience of the Manchester Unity, so as to enable any person to form an opinion of the difference of the Rates of Mortality, Specific Intensity, in one class as compared with the other.

Subsequent to this period, in the twelfth Report of the Registrar General appeared a Table of the Rate of Mortality of England and Wales, deduced from the population living at different ages in the year 1841, and from the deaths taking place during the seven years 1838-44, and which Table has been recalculated, beginning at age 18, for the purpose of enabling Members to ascertain, on comparison with this and similar Tables of the Unity, the numbers living and dying at each year given in those Tables, as well as the Specific Intensity at the different ages.

If reference be made to the Table (English Life Table), it will be seen that, by the time 100,000 lives at age 18 arrive at age 30, there have died off 9901 persons, leaving 90,099 to enter on the thirtieth year of life. On arriving at age 50, there have died off, from the same number at age 18, 30,504, leaving 69,496 persons to enter on the fiftieth

year of life; and that between the ages 62-3, one half of the number of lives have passed away; but from the Table calculated from the one appearing in the fifth Report of the Registrar General, on entering on the thirtieth year, 9976 persons have died, leaving 90,063 persons to enter the experience of the thirtieth year of life. At the age 50, 30,905 persons have died off, leaving 69,095 persons to enter on the fiftieth year of life; and that between the years 63-4, one half the lives died off, shewing a superior vitality during the year 1841 to the latter ages than appears for the whole of the seven years 1838-44.

The English Life Table, from the twelfth Report of the Registrar General, when compared with the table appearing in a former edition of the experience of the Manchester Unity, calculated from the fifth Report of the Registrar General, shews a higher rate of mortality up to age 23. From that age to age 45, the highest rate of mortality appears from the fifth Report. From this age to the end of the table, the rate is most favourable from the fifth Report. In the first named table, half the lives die off between the ages 62-3, and in the latter, 50,043, being alive at age 63, shews that more than half the lives get over this year, and die off between the ages 63-4.

The Specific Intensity, or number of persons living out of which one has annually died, is greatest from the deaths, in the year 1841, at the following decennial periods, 20, 50, 60, and 70; and at the decennial periods of 30 and 40 the specific intensity is greatest, from the twelfth Report, including all the deaths in the years 1838-44.

TABLE I.

ENGLISH LIFE TABLE.—MALES.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	761	.7613	131.84	61	53406	1882	3.5246	28.36
19	99239	793	.7987	125.19	62	51524	1950	3.7846	26.42
20	98446	800	.8131	122.97	63	49574	2019	4.0730	24.55
21	97646	808	.8275	120.91	64	47555	2082	4.3796	22.83
22	96838	815	.8421	118.75	65	45473	2143	4.7131	21.21
23	96023	823	.8973	116.74	66	43330	2197	5.0707	19.72
24	95200	830	.8721	114.65	67	41133	2249	5.4685	18.28
25	94370	838	.8878	112.62	68	38884	2297	5.9106	16.92
26	93532	846	.9041	110.60	69	36587	2328	6.3639	15.71
27	92686	853	.9212	108.54	70	34259	2354	7.1962	14.55
28	91833	862	.9372	106.47	71	31905	2369	7.4258	13.46
29	90971	872	.9582	104.36	72	29536	2371	8.0275	12.45
30	90099	881	.9783	102.20	73	27165	2358	8.6807	11.51
31	89218	892	1.0001	99.98	74	24807	2329	9.3889	10.65
32	88326	903	1.0225	97.79	75	22478	2282	10.1552	9.84
33	87423	915	1.0468	95.74	76	20196	2218	10.9826	9.10
34	86508	928	1.0726	93.22	77	17978	2135	11.8758	8.42
35	85580	942	1.1004	90.87	78	15843	2033	12.8369	7.79
36	84638	956	1.1301	88.49	79	13810	1915	13.8695	7.21
37	83682	972	1.1621	86.08	80	11895	1781	14.9774	6.67
38	82710	989	1.1953	83.65	81	10114	1634	16.1630	6.18
39	81721	1006	1.2312	81.21	82	8480	1478	17.4312	5.73
40	80715	1024	1.2695	78.76	83	7002	1315	18.7840	5.32
41	79691	1044	1.3104	76.31	84	5687	1150	20.2259	4.94
42	78647	1064	1.3539	73.86	85	4537	987	21.7606	4.59
43	77583	1086	1.4000	71.42	86	3550	830	23.3918	4.27
44	76497	1095	1.4326	69.80	87	2720	683	25.1203	3.98
45	75402	1132	1.5012	66.61	88	2037	549	27.0146	3.71
46	74270	1155	1.5562	64.25	89	1488	430	28.8928	3.46
47	73115	1181	1.6152	61.90	90	1058	327	30.2397	3.23
48	71934	1206	1.6766	59.64	91	731	242	33.1097	3.02
49	70728	1232	1.7420	57.40	92	489	173	35.3927	2.82
50	69496	1258	1.8109	55.22	93	316	119	37.8033	2.62
51	68238	1285	1.8836	53.08	94	197	79	40.3565	2.48
52	66953	1312	1.9601	51.01	95	118	51	43.0166	2.31
53	65641	1339	2.0405	49.00	96	67	31	45.8003	2.18
54	64302	1372	2.1346	46.84	97	36	17	48.6563	2.05
55	62930	1392	2.2131	45.08	98	19	9	51.8260	1.93
56	61538	1438	2.3372	42.78	99	10	6	55.0739	1.81
57	60100	1540	2.5626	39.02	100	4	2	58.4775	1.71
58	58560	1633	2.7898	35.84	101	2	1	62.2641	1.60
59	56927	1720	3.0225	33.08	102	1	1	100.0000	1.00
60	55207	1801	3.2636	30.64					

As a farther explanation of the difference existing in the experience previously named, it has been considered advisable to give the Expectation, or what is generally termed, the "Mean after Life-time;" and as many may not be in possession of the expectation, or after life-time, deduced from the fifth Report of the Registrar General, the same is here given, showing also the difference at the given ages.

Age.	After Life Time. 5th Report.	After Life Time. 12th Report.	Difference.
20	39.88	39.99	.11
30	33.13	33.21	.08
40	26.56	26.46	.10
50	20.02	19.87	.15
60	13.59	13.60	.01
70	8.51	8.55	.04

The following Table gives the mean after life-time at each of the following ages, taken from the twelfth Report of the Registrar General, calculated on the living in the year 1841, and from the deaths registered in the seven years 1838-44:—

Age.	Mean after Life Time.	Age.	Mean after Life Time.	Age.	Mean after Life Time.	Age.	Mean after Life Time.	Age.	Mean after Life Time.	Age.	Mean after Life Time.
18	41.35	31	32.53	44	23.79	57	15.39	70	8.55	83	4.19
19	40.67	32	31.85	45	23.13	58	14.77	71	8.13	84	3.96
20	39.99	33	31.17	46	22.48	59	14.18	72	7.72	85	3.74
21	39.31	34	30.50	47	21.82	60	13.60	73	7.32	86	3.53
22	38.63	35	29.82	48	21.17	61	13.03	74	6.94	87	3.33
23	37.96	36	29.15	49	20.52	62	12.48	75	6.57	88	3.14
24	37.28	37	28.47	50	19.87	63	11.94	76	6.22	89	2.97
25	36.60	38	27.80	51	19.22	64	11.42	77	5.89	90	2.80
26	35.92	39	27.13	52	18.58	65	10.90	78	5.57	91	2.65
27	35.24	40	26.46	53	17.94	66	10.41	79	5.26	92	2.50
28	34.57	41	25.79	54	17.30	67	9.92	80	4.97	93	2.36
29	33.89	42	25.12	55	16.66	68	9.45	81	4.70	94	2.11
30	33.21	43	24.46	56	16.02	69	9.00	82	4.44	95	2.00

In 1845, Mr. Neison obtained, through the kindness of Mr. John Tidd Pratt, the Registrar of Friendly Societies in England, the quinquennial returns for the years 1836-40, and from this data has given the rate of mortality and average rate of sickness, together with tables of contributions, from the experience of 1,147,143 years of life.

It has been already stated, that the Executive of the Manchester Unity obtained returns of the age of their members, the amount of sickness, and the number of deaths, for the years 1846-8; and from this data were obtained the average rate of mortality and sickness, and tables of contributions, from the experience of 621,561 years of life.

The returns obtained by the Registrar of Friendly Societies for the period of five years, ending the 31st day of December, 1850, and containing the experience of 792,980 years of life, having been placed in the hands of Mr. A. Finlaison, from such data he has given the rate of mortality and sickness, experienced in three separate divisions; also the sickness

and mortality experienced by members performing light labour, with and without exposure to the weather; and performing heavy labour under the same conditions.

Other persons have collected data, for the purpose of ascertaining the rate of mortality and average rate of sickness, but in some cases, from the length of time elapsed since the same was given, and in other cases from the small amount of experience obtained, the data referred to above, will only be compared, in the present work, with the experience of the Manchester Unity for the years 1856-60.

It must also be distinctly understood that, in the results given by Mr. Finlaison, miners, colliers, and mariners, are excluded, and are given by him in separate and distinct tables.

TABLE III.

ADJUSTED RATE OF MORTALITY, FROM THE EXPERIENCE OF FRIENDLY SOCIETIES, RURAL, TOWN, AND CITY DISTRICTS, AND THE THREE DISTRICTS COMBINED, FROM MR. FINLAISON'S REPORT OF 1853.—MALES.

Mariners, Miners, and Colliers excluded.

Age.	Rural.	Town.	City.	Rural, Town, and City.	Age.	Rural.	Town.	City.	Rural, Town, and City.
18	.60	.85	1.06	.67	52	1.45	1.76	2.09	1.64
19	.64	.90	.90	.71	53	1.49	1.86	2.38	1.73
20	.66	.93	1.07	.74	54	1.67	2.07	2.41	1.90
21	.68	.90	.85	.75	55	1.80	2.10	2.72	2.03
22	.71	.82	.84	.75	56	2.01	2.41	2.73	2.24
23	.71	.76	.80	.73	57	2.13	2.48	2.97	2.36
24	.70	.72	.76	.71	58	2.26	2.67	3.16	2.52
25	.69	.72	.84	.71	59	2.22	2.68	3.38	2.53
26	.69	.70	.91	.71	60	2.27	2.84	3.35	2.61
27	.69	.76	.86	.73	61	2.34	2.88	3.54	2.68
28	.71	.78	.97	.76	62	2.58	3.01	3.58	2.86
29	.73	.79	.99	.78	63	2.76	3.20	3.27	2.98
30	.72	.78	.97	.77	64	3.10	3.77	3.52	3.38
31	.72	.81	1.04	.79	65	3.41	4.06	3.85	3.69
32	.73	.79	1.10	.80	66	3.58	4.49	4.03	3.94
33	.72	.81	1.07	.80	67	3.95	5.30	3.90	4.39
34	.71	.82	1.10	.80	68	4.30	5.75	4.60	4.81
35	.73	.86	1.19	.83	69	4.72	5.86	4.91	5.11
36	.74	.90	1.24	.86	70	5.14	6.40	4.94	5.52
37	.74	.95	1.36	.89	71	5.80	6.47	5.11	5.92
38	.77	1.02	1.48	.95	72	6.03	6.52	6.22	6.20
39	.81	1.04	1.66	1.00	73	6.37	7.22	6.65	6.66
40	.85	1.08	1.63	1.03	74	7.07	7.36	6.98	7.14
41	.89	1.11	1.63	1.06	75	7.52	7.61	7.67	7.56
42	.94	1.14	1.63	1.10	76	8.54	8.38	9.17	8.57
43	.94	1.19	1.61	1.11	77	9.58	8.31	9.06	9.21
44	.97	1.29	1.56	1.15	78	11.04	8.81	8.60	10.26
45	1.00	1.38	1.66	1.21	79	11.29	10.49	8.29	10.80
46	1.04	1.45	1.63	1.25	80	12.92	13.67	9.86	12.77
47	1.05	1.57	1.72	1.31	81	13.18	16.16	9.17	13.40
48	1.16	1.56	1.70	1.36	82	13.92	19.16	11.84	14.75
49	1.21	1.61	1.83	1.42	83	14.95	19.49	13.73	15.68
50	1.29	1.71	1.82	1.50	84	16.76	20.93	15.15	17.42
51	1.35	1.71	2.07	1.56					

On a comparison of the rate of mortality exhibited by the English Life Table, and that of the Rural, Town, and City Districts combined, of the experience of Friendly Societies, by Mr. Finlaison, the English Table shows an excess of mortality at every age; and it is evident, from all the data hitherto obtained, that members of Friendly Societies do not experience as high a rate of mortality as the aggregate of the population of England and Wales. At the following periods of life, the excess of mortality in England and Wales is given, and what is very apparent, the excess increases with the increase of age:—

Age.	Mortality. English Life Table.	Mortality. Friendly Societies. Finlaison.	Excess of Mortality by English Life Table.
20	.8131	.7400	.0731
30	.9783	.7700	.2083
40	1.2695	1.0300	.2395
50	1.8109	1.5000	.3109
60	3.2636	2.6100	.6536
70	7.1962	5.5200	1.6762
80	14.9774	12.7700	2.2074

The following tabular statement shews the rate of mortality experienced by members of Friendly Societies as given by Mr. Neison, the experience of the Unity in 1846-8, and by the experience of Friendly Societies, Mr. Finlaison:—

RATE OF MORTALITY.

Age.	Nelson.	Unity, 1846-8.	Finlaison.
20	.6758	.6034	.74
25	.7020	.7759	.71
30	.7563	.8338	.77
35	.8294	.9008	.83
40	.9386	1.0507	1.03
45	1.1200	1.3282	1.21
50	1.4267	1.7630	1.50
55	1.8986	2.4421	2.03
60	2.5054	3.5293	2.61
65	3.5511	5.4924	3.69
70	5.5301	6.8327	5.52

The highest rate of mortality, age 20 excepted, appears at every period in the experience of the Manchester Unity; the lowest, with the exception just named, in that of the same class of Societies by Mr. Neison.

DURATION OF LIFE IN THE UNITY.

The Manchester Unity consists of a number of branches, called lodges. These lodges are governed by their own rules and regulations, subject to the general laws of the Society; and each of these branches pays the expense of its own management, and the members make provision for an allowance in sickness and at death, by payment of an annual contribution. A number of these branches then join together in districts, for the purpose of forming an Assurance Society, for the payment of a sum of money at the death of any of the members, and the amount required for the assurance is paid by levy on the lodges forming such districts. Officers are appointed to conduct the business of these districts, who annually make

a return to the Executive Government, of the number, and age of the members who have died during the preceding twelve months. From the returns sent in by individual lodges, verified by those of the district, the tables in the present work have been compiled.

In many instances, some difficulty was experienced in obtaining returns from lodges; and although these returns were afterwards obtained, in order that the branch might comply with the regulations of the society, yet, when obtained under such circumstances, it was considered advisable not to include them in the present data. In other instances, where any doubt appeared, or where, on examination with the district returns, there appeared a discrepancy, the returns were at once rejected.

The returns thus obtained were afterwards arranged into three districts. The first, or Rural District, includes all branches held in any rural township, or small village, having less than five thousand inhabitants. The second, or Town Districts, includes all branches in those towns or villages bordering on large towns, as well as towns and villages not bordering on such places, but having more than five, and less than thirty thousand inhabitants. The third, or City Class, includes all lodges held in any city or town district having more than thirty thousand inhabitants.

The number of members, number of deaths, and amount of sickness experienced by each separate trade was then extracted from each of the districts, and entered in a book provided for the purpose: first, under the head of each distinct trade, and afterwards under that of rural, town, or city district, as the case might be. After the trades, classified, had been extracted, the remainder were entered under one general head.

The result of these investigations will be found at Tables IV., V., VI., and VII. the last table being the experience of the members of the Manchester Unity for five years, including, in the whole, 1,006,272 years of life.

In these tables will be seen the number of persons observed upon at each age, the number of deaths, and amount of sickness; also, in periods, the number of members, the rate of mortality per cent., and the average sickness experienced.

RURAL DISTRICTS.

TABLE IV.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
18	64	8749	3	88	1.0058	12.571	7345.571	.8395
19	2631		21			2013.429		
20	6054		64			5319.571		
21	8315		68			6909.143		
22	10518	55427	66	385	.6946	8869.285	46441.571	.8378
23	11792		77			9857.285		
24	12372		94			10562.000		
25	12430		80			10243.858		
26	11908	55395	100	408	.7365	10556.858	47522.716	.8578
27	11474		78			9491.572		
28	10996		74			9391.000		
29	10583		65			8927.000		
30	10434	48429	91	362	.7474	9156.286	43753.571	.9084
31	10020		66			8797.142		
32	9904		68			8654.429		
33	9642		80			8401.429		
34	9536	9327	71	77		9092.857		
35	9327		77			8807.714		

TABLE IV.—CONTINUED.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
36	9581	45626	87	408	.8942	9199.000	47437.571	1.0396
37	9434		69			9833.428		
38	9209		81			9740.572		
39	8879		92			9014.000		
40	8523		79			9650.571		
41	7973	35973	82	325	.9035	8363.000	40289.857	1.1199
42	7530		71			8125.285		
43	7142		45			7935.143		
44	6801		64			7918.571		
45	6527		63			7947.858		
46	6329	27809	62	313	1.1255	8845.572	41172.143	1.4805
47	6058		74			7896.857		
48	5664		53			8411.286		
49	5154		66			8319.714		
50	4604		58			7698.714		
51	3980	15705	52	229	1.4624	6988.000	31813.000	2.0303
52	3534		55			7296.000		
53	3098		34			6473.714		
54	2746		47			5519.286		
55	2347		41			5536.000		
56	2202	8474	50	188	1.7622	5285.000	23273.857	2.7464
57	1931		37			4863.000		
58	1701		40			4682.428		
59	1380		26			4700.143		
60	1260		35			3743.286		
61	888	2801	30	92	3.2854	3090.142	10657.713	3.8047
62	662		14			2587.429		
63	528		20			2023.142		
64	406		16			1546.142		
65	317		12			1410.858		
66	235	766	5	29	3.7859	1227.572	5229.286	6.8263
67	194		6			1415.143		
68	138		9			828.000		
69	106		3			804.429		
70	93		6			954.142		
71	72	263	6	23	8.7456	1026.429	3220.287	12.2439
72	59		6			700.143		
73	52		6			513.714		
74	46		2			550.858		
75	34		3			429.143		
76	25	60	4	6	10.0000	269.000	591.000	9.8500
77	15		...			160.429		
78	10		2			152.142		
79	6		...			8.429		
80	4		...			.....
81	2	7	...	2	28.5714	2.572	36.715	18.3575
82	3		...			33.000		
83	1		...			.143
84	1		1			1.000		
85	...		...			.....
86	1	1	1	1		28.000	28.000	
	305485		2859		.9359	348812.858		1.1418

TABLE V.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
18	56	9226	1	78	.8454	18.571	7548.571	.8766
19	2636		19			2132.286		
20	6534		58			5397.714		
21	9705		68			7808.429		
22	12411		85			10356.714		
23	15175	68579	109	501	.7305	12088.143	56198.571	.8194
24	15095		118			12621.000		
25	16193		121			13324.285		
26	15596		118			12368.286		
27	14575		92			12244.714		
28	14370	71394	118	517	.7241	11356.715	58424.143	.8184
29	13614		89			11705.142		
30	13239		100			10749.286		
31	12854		88			10380.715		
32	12732		100			10977.714		
33	12765	63804	124	539	.8447	11091.286	55295.430	.8660
34	12688		121			11667.715		
35	12765		106			11178.000		
36	13132		120			12928.286		
37	13126		129			13418.428		
38	12997	64498	134	643	.9969	14126.572	69237.571	1.0734
39	12732		128			13917.285		
40	12511		132			14847.000		
41	12160		148			14948.286		
42	11642		151			16190.428		
43	11216	56444	139	669	1.1852	15228.572	76497.572	1.3543
44	10861		114			14645.715		
45	10565		117			15484.571		
46	10422		147			15570.000		
47	9957		152			15637.000		
48	9309	46332	133	691	1.4917	15295.571	75624.001	1.6325
49	8715		145			14809.715		
50	7929		114			14311.715		
51	7032		110			14218.571		
52	7443		132			13284.000		
53	5868	30827	117	584	1.8944	12082.000	64954.714	2.1070
54	5438		119			12134.429		
55	4996		106			13235.714		
56	4611		109			13179.714		
57	4104		100			12277.000		
58	3661	18423	93	481	2.6108	11711.715	59715.858	3.2413
59	3253		99			11572.000		
60	2794		80			10975.429		
61	2209		71			9175.858		
62	1907		76			9164.000		
63	1615	8116	55	316	3.8935	8494.142	42674.859	5.2580
64	1308		56			8155.000		
65	1077		58			7685.859		
66	860		46			5361.286		
67	681		46			5019.714		
68	543	2864	29	167	5.8176	4481.428	22767.142	7.9491
69	440		25			4376.572		
70	340		21			3528.142		

TABLE IV.—CONTINUED.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
36	9581	45626	87	408	.8942	9199.000	47437.571	1.0396
37	9434		69			9833.428		
38	9209		81			9740.572		
39	8879		92			9014.000		
40	8523		79			9650.571		
41	7973	35973	82	325	.9035	8363.000	40289.857	1.1199
42	7530		71			8125.285		
43	7142		45			7935.143		
44	6801		64			7918.571		
45	6527		63			7947.858		
46	6329	27809	62	313	1.1255	8845.572	41172.143	1.4805
47	6058		74			7896.857		
48	5664		53			8411.286		
49	5154		66			8319.714		
50	4604		58			7698.714		
51	3980	15705	52	229	1.4624	6988.000	31813.000	2.0303
52	3534		55			7296.000		
53	3098		34			6473.714		
54	2746		47			5519.286		
55	2347		41			5536.000		
56	2202	8474	50	188	1.7622	5285.000	23273.857	2.7464
57	1931		37			4863.000		
58	1701		40			4682.428		
59	1380		26			4700.143		
60	1260		35			3743.286		
61	888	2801	30	92	3.2854	3090.142	10657.713	3.8047
62	662		14			2587.429		
63	528		20			2023.142		
64	406		16			1546.142		
65	317		12			1410.858		
66	235	766	5	29	3.7859	1227.572	5229.286	6.8263
67	194		6			1415.143		
68	138		9			828.000		
69	106		3			804.429		
70	93		6			954.142		
71	72	263	6	23	8.7456	1026.429	3220.287	12.2439
72	59		6			700.143		
73	52		6			513.714		
74	46		2			550.858		
75	34		3			429.143		
76	25	60	4	6	10.0000	269.000	591.000	9.8500
77	15		...			160.429		
78	10		2			152.142		
79	6		...			8.429		
80	4		...			.....
81	2	7	...	2	28.5714	2.572	36.715	18.3575
82	3		1			33.000		
83	1		...			.143
84	1		1			1.000		
85	...		...			.....
86	1	1	1	1		28.000	28.000	
	305485		2859		.9359	348812.858		1.1418

TABLE V.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
18	56	9226	1	78	.8454	18.571	7548.571	.8766
19	2636		19			2132.286		
20	6534		58			5397.714		
21	9705		68			7808.429		
22	12411		85			10356.714		
23	15175	68579	109	501	.7305	12088.143	56198.571	.8194
24	15095		118			12621.000		
25	16193		121			13324.285		
26	15596		118			12368.286		
27	14575		92			12244.714		
28	14370	71394	118	517	.7241	11356.715	58424.143	.8184
29	13614		89			11705.142		
30	13239		100			10749.286		
31	12854		88			10380.715		
32	12732		100			10977.714		
33	12765	63804	124	539	.8447	11091.286	55295.430	.8660
34	12688		121			11667.715		
35	12765		106			11178.000		
36	13132		120			12928.286		
37	13126		129			13418.428		
38	12997	64498	134	643	.9969	14126.572	69237.571	1.0734
39	12732		128			13917.285		
40	12511		132			14847.000		
41	12160		148			14948.286		
42	11642		151			16190.428		
43	11216	56444	139	669	1.1852	15228.572	76497.572	1.3543
44	10861		114			14645.715		
45	10565		117			15484.571		
46	10422		147			15570.000		
47	9957		152			15637.000		
48	9309	46332	133	691	1.4917	15295.571	75624.001	1.6325
49	8715		145			14809.715		
50	7929		114			14311.715		
51	7082		110			14218.571		
52	7443		132			13284.000		
53	5868	30827	117	584	1.8944	12082.000	64954.714	2.1070
54	5438		119			12134.429		
55	4996		106			13235.714		
56	4611		109			13179.714		
57	4104		100			12277.000		
58	3661	18423	93	481	2.6108	11711.715	59715.858	3.2413
59	3258		99			11572.000		
60	2794		80			10975.429		
61	2209		71			9175.858		
62	1907		76			9164.000		
63	1615	8116	55	316	3.8935	8494.142	42674.859	5.2580
64	1308		56			8155.000		
65	1077		58			7685.859		
66	860		46			5361.286		
67	681		46			5019.714		
68	543	2864	29	167	5.8176	4481.428	22767.142	7.9491
69	440		25			4376.572		
70	340		21			3528.142		

TABLE V.—CONTINUED.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
71	269	885	17	76	8.5875	3428.429	12181.430	13.7638
72	214		21			2738.142		
73	167		17			2249.572		
74	128		6			1887.858		
75	107		15			1877.429		
76	87	271	9	37	13.6531	1675.858	5092.430	18.7896
77	55		10			960.858		
78	54		6			1031.143		
79	46		8			917.143		
80	29		4			507.428		
81	20	53	4	7	13.2075	306.286	1167.286	21.9176
82	15		2			335.000		
83	9		...			268.000		
84	5		...			156.000		
85	4		1			102.000		
86	3	8	...	1	12.5000	4.000	.5000
87	2		...			4.000		
88	1		...			.....
89	1		...			.....
90	1		1			.....	
91	1	1		
	441725		5307		1.2014	607383.578		1.3751

CITY DISTRICTS.

TABLE VI.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
18	2	2894	...	20	.6910	2365.857	.8172
19	852		3			546.571		
20	2040		17			1819.286		
21	3623		24			2772.142		
22	5589		56			4725.715		
23	6231	31813	49	254	.7984	5407.000	25842.571	.8123
24	7975		58			6125.428		
25	8395		67			6812.286		
26	8328		75			7116.857		
27	8289		66			6616.572		
28	8193	40529	67	362	.8931	6361.000	31579.286	.7791
29	7923		83			5306.571		
30	7796		71			6178.286		
31	7530		70			5872.857		
32	7422		74			6194.429		
33	7563	37767	78	361	.9510	6048.142	31962.714	.8462
34	7619		64			6962.286		
35	7633		75			6885.000		
36	8107		89			7886.571		
37	8269		118			8102.715		
38	8032	40636	91	523	1.2870	8216.428	42657.857	1.0497
39	8119		104			8742.428		
40	8109		121			9709.715		

TABLE VI.—CONTINUED.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
41	7959	37941	133	558	1.4707	10063.857	50329.571	1.3265
42	7747		94			9987.143		
43	7624		122			9806.000		
44	7402		98			10048.428		
45	7209		111			10424.143		
46	7022	31953	111	581	1.8182	10581.715	53995.144	1.3421
47	6793		114			10605.715		
48	6210		119			11165.142		
49	5748		120			11566.572		
50	6180		117			10076.000		
51	4508	18698	105	450	2.4066	9232.857	46785.857	2.5021
52	4017		86			9664.143		
53	3708		86			9372.571		
54	3395		88			9539.857		
55	3070		85			8976.429		
56	2785	10922	80	375	3.4334	8852.571	39830.428	3.6467
57	2504		87			8440.285		
58	2257		85			8193.857		
59	1857		75			7535.715		
60	1519		48			6808.000		
61	1161	4082	45	195	4.7770	6149.000	24287.143	4.7261
62	954		38			5474.428		
63	812		42			4844.428		
64	654		40			4385.429		
65	501		30			3433.858		
66	381	1199	24	77	6.4220	2941.571	9389.858	7.8306
67	305		19			2017.286		
68	202		13			1722.286		
69	167		13			1314.857		
70	144		8			1393.858		
71	115	453	5	25	5.5187	1217.142	5555.571	12.2627
72	107		2			1270.429		
73	94		5			1400.285		
74	78		7			987.429		
75	59		6			680.286		
76	38	113	4	8	7.0812	508.286	2148.142	19.0088
77	24		1			441.142		
78	24		1			415.714		
79	14		...			421.000		
80	13		2			362.000		
81	12	43	1	5	1.1627	272.000	997.858	23.2048
82	11		1			220.142		
83	9		1			271.858		
84	6		1			121.000		
85	5		1			112.858		
86	4	10	...	2	22.2222	60.000	145.714	16.1905
87	2		...			20.000		
88	2		...			.....
89	2		...			52.000		
90	2		...			52.000		
91	3	9	...			55.714		
92	3		...			35.000		
93	2		1			3.000		
94	1		1					
	259062		3796		1.4653	368005.571		1.4205

TABLE VII.

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
18	122		4			31.142		
19	6119	20869	43	186	.8912	4692.286	17259.999	.8270
20	14628		139			12536.571		
21	21643		160			17489.714		
22	28518		207			23951.714		
23	33198	155819	235	1140	.7716	27352.428	128482.713	.8246
24	35442		270			29308.428		
25	37018		268			30380.429		
26	35832		293			30042.000		
27	34338	167318	236	1287	.7569	28352.859	137526.145	.8125
28	33559		259			27108.714		
29	32120		237			25938.714		
30	31469		262			26083.858		
31	30404	150000	224	1262	.8414	25050.714	131011.715	.8733
32	30058		242			25826.572		
33	29970		282			25540.857		
34	29843		256			27722.858		
35	29725	150760	258	1574	1.0415	26870.714	159332.999	1.0568
36	30820		296			30013.857		
37	30829		316			31354.571		
38	30238		306			32083.572		
39	29730	130358	324	1552	1.1906	31673.713	167117.000	1.2846
40	29143		332			34207.286		
41	28092		363			33375.143		
42	26919		316			34302.856		
43	25982	106094	306	1585	1.4939	32969.715	170791.288	1.6099
44	25064		276			32612.714		
45	24301		291			33856.572		
46	23773		320			34997.287		
47	22808	65230	340	1263	1.9362	34139.572	143553.571	2.2007
48	21183		305			34872.000		
49	19617		331			34696.000		
50	18713		289			32086.429		
51	15570	37819	267	1044	2.7605	30439.428	122820.143	3.2475
52	14994		273			30244.143		
53	12674		237			27928.285		
54	11579		254			27193.572		
55	10413	14999	232	603	4.0295	27748.143	77619.715	5.1749
56	9598		239			27317.285		
57	8539		224			25580.285		
58	7619		218			24588.000		
59	6490	4829	200	273	5.6533	23807.858	37386.286	7.2419
60	5573		163			21526.715		
61	4258		146			18415.000		
62	3523		128			17225.857		
63	2955	577	117	35		15361.712		
64	2368		112			14086.571		
65	1895		100			12530.575		
66	1476		75			9530.429		
67	1180		71			8452.143		
68	883		51			7031.714		
69	713		41			6495.858		
70	577		35			5876.142		

AGE.	No. OF MEMBERS.		DEATHS.			SICKNESS.		
	At each Age.	In Periods.	At each Age.	In Periods.		At each Age.	In Periods.	
				Total.	Per Cent.		Total.	Per Annum.
71	456	1601	28	124	7.7451	5672.000	20957.288	13.0899
72	380		29			4708.714		
73	313		28			4163.571		
74	252		15			3426.145		
75	200		24			2986.858		
76	150	444	17	51	11.4862	2453.144	7831.572	17.6373
77	94		11			1562.429		
78	88		9			1599.999		
79	66		8			1346.572		
80	46		6			869.428		
81	34	103	5	14	13.5923	580.858	2201.859	21.2707
82	29		4			588.143		
83	19		1			540.000		
84	12		2			278.000		
85	9		2			214.858		
86	8	19	1	2	10.5263	88.000	164.000	8.6316
87	4		...			24.000		
88	3		...			.....
89	1		...			.....
90	3		1			52.000		
91	4	10	...	2	20.0000	52.000	145.714	14.5714
92	3		...			55.714		
93	2		1			35.000		
94	1		1			3.000		
	1,006,272		11962		1.1887	1,324,202.007		1.3159

After the returns had been analyzed and entered under their respective districts, the number of members, number of deaths, and amount of sickness were added together in periods of five years. The number of deaths and amount of sickness for each period being divided by the number of members, gave the mean rate of mortality and average sickness for each of the periods given in the table.

For a further adjustment of the rate of mortality, the difference between each period was ascertained and divided by five, and then added to, or subtracted from, the preceding one. The rate was then taken at each age, and that of the two preceding and two following terms added thereto, and divided by five. This may be considered a fair expression of the rate of mortality for every year of life, opposite to which the same is placed in the following tables.

In analysing the sickness, the amount experienced during the first, the second, the third, and the fourth, half-yearly periods, together with the remainder, if any, after an illness of two years' duration, was entered under the age of the member, at the time such sickness occurred. The result will be found in Table XL.

TABLE VIII.

MORTALITY.—RURAL DISTRICTS.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	936	.9368	106.75	60	64649	1536	2.3713	42.07
19	99064	896	.9048	110.52	61	63113	1688	2.6757	37.34
20	98168	860	.8752	114.25	62	61425	1830	2.9793	33.56
21	97308	791	.8130	122.97	63	59595	1884	3.1620	31.62
22	96517	740	.7669	130.39	64	57711	1928	3.3440	29.90
23	95777	704	.7349	136.07	65	55783	1944	3.4851	28.69
24	95073	682	.7170	139.47	66	53839	1930	3.5853	27.89
25	94391	671	.7112	140.60	67	51909	2005	3.8639	25.88
26	93720	673	.7236	139.15	68	49904	2156	4.3209	23.14
27	93047	676	.7267	137.60	69	47748	2366	4.9561	20.17
28	92371	677	.7326	136.50	70	45382	2618	5.7697	17.33
29	91694	677	.7374	135.61	71	42764	2891	6.7616	14.78
30	91017	674	.7409	134.97	72	39873	3032	7.6053	13.14
31	90343	671	.7430	134.58	73	36841	3058	8.3008	12.04
32	89672	673	.7506	133.22	74	33783	2989	8.8481	11.30
33	88999	680	.7637	130.94	75	30794	2808	9.2472	10.97
34	88319	691	.7825	127.79	76	27986	2658	9.4981	10.52
35	87628	706	.8068	123.94	77	25328	2528	9.9837	10.01
36	86922	718	.8361	121.05	78	22800	2440	10.7041	9.34
37	86204	741	.8600	116.27	79	20360	2368	11.6593	8.57
38	85463	751	.8783	113.85	80	17992	2311	12.8491	7.79
39	84712	755	.8908	112.25	81	15681	2238	14.2778	7.00
40	83957	754	.8978	111.38	82	13443	2104	15.6544	6.38
41	83203	749	.8998	111.62	83	11339	1926	16.9910	5.88
42	82454	751	.9103	109.95	84	9413	1721	18.2837	5.46
43	81703	759	.9290	107.52	85	7692	1502	19.5324	5.12
44	80944	774	.9564	104.68	86	6190	1283	20.7371	4.82
45	80170	796	.9925	100.75	87	4907	1081	22.0199	4.53
46	79374	823	1.0370	96.43	88	3826	937	23.3808	4.08
47	78551	853	1.0860	92.08	89	2889	717	24.8198	4.03
48	77698	885	1.1397	87.76	90	2172	572	26.3389	3.79
49	76813	920	1.1979	83.47	91	1600	447	27.9321	3.58
50	75893	957	1.2606	79.32	92	1153	343	29.8033	3.35
51	74936	993	1.3277	75.49	93	810	259	31.9505	3.12
52	73943	1028	1.3937	71.91	94	551	188	34.1738	2.92
53	72915	1050	1.4580	68.58	95	363	131	36.6731	2.76
54	71865	1092	1.5209	65.75	96	232	91	39.4436	2.53
55	70773	1119	1.5822	63.20	97	141	58	41.6869	2.39
56	69654	1143	1.6422	60.89	98	83	35	42.8404	2.33
57	68511	1200	1.7513	57.10	99	48	21	44.1044	1.80
58	67311	1265	1.9090	52.39	100	27	27	100.0000	1.00
59	66046	1397	2.1157	47.26					

TABLE IX.

MORTALITY.—TOWN DISTRICTS.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	845	.8454	118.28	60	58706	1834	3.1238	32.01
19	99155	815	.8228	121.53	61	56872	1877	3.3803	30.30
20	98340	786	.7994	125.09	62	54995	2014	3.6625	27.30
21	97554	757	.7765	128.78	63	52981	2152	3.9702	25.18
22	96797	718	.7578	134.72	64	50829	2187	4.3035	23.23
23	96079	714	.7435	134.49	65	48642	2268	4.6625	21.44
24	95365	700	.7335	136.33	66	46374	2341	5.0473	19.81
25	94665	689	.7279	137.38	67	44033	2407	5.4659	18.29
26	93976	683	.7266	137.62	68	41626	2469	5.9306	16.86
27	93293	681	.7304	136.91	69	39157	2508	6.4052	15.61
28	92612	681	.7353	135.99	70	36649	2538	6.9256	14.43
29	91931	692	.7532	132.76	71	34111	2549	7.4795	13.38
30	91239	705	.7723	129.48	72	31562	2565	8.1253	12.31
31	90534	721	.7964	125.56	73	28997	2570	8.8630	11.28
32	89813	738	.8218	121.68	74	26427	2561	9.6924	10.31
33	89075	756	.8484	117.86	75	23866	2532	10.6137	9.42
34	88319	774	.8763	114.11	76	21334	2480	11.6268	8.60
35	87545	793	.9055	110.43	77	18854	2345	12.4195	8.05
36	86752	812	.9359	106.84	78	16509	2145	12.9917	7.69
37	85940	831	.9677	103.33	79	14364	1914	13.3435	7.50
38	85109	852	1.0016	99.84	80	12450	1677	13.4749	7.42
39	84257	876	1.0370	96.48	81	10773	1442	13.6857	7.46
40	83381	895	1.0736	93.14	82	9331	1284	13.7676	7.26
41	82486	921	1.1113	89.98	83	8047	1176	14.6205	6.84
42	81565	941	1.1537	86.67	84	6871	1098	15.9844	6.11
43	80624	968	1.2003	83.31	85	5773	1024	17.7393	5.63
44	79656	997	1.2517	79.89	86	4749	950	20.0052	4.99
45	78659	1028	1.3078	76.46	87	3799	843	22.1940	4.50
46	77631	1062	1.3691	73.04	88	2956	718	24.3057	4.11
47	76569	1108	1.4342	69.08	89	2238	590	26.3403	3.79
48	75461	1134	1.5032	66.52	90	1648	466	28.2979	3.53
49	74327	1171	1.5760	63.45	91	1182	357	30.1783	3.31
50	73156	1209	1.6527	60.78	92	825	267	32.3762	3.08
51	71947	1247	1.7332	57.69	93	558	195	34.8917	2.86
52	70700	1291	1.8263	54.75	94	363	137	37.7247	2.65
53	69409	1341	1.9320	51.75	95	226	92	40.8752	2.44
54	68068	1395	2.0502	48.77	96	134	59	44.3432	2.25
55	66673	1454	2.1810	45.85	97	75	36	47.8132	2.09
56	65219	1516	2.3242	44.02	98	39	20	51.2792	1.95
57	63703	1586	2.4902	40.15	99	19	10	54.7473	1.82
58	62117	1664	2.6787	37.33	100	9	9	100.0000	1.00
59	60453	1747	2.8899	34.60					

TABLE X.

MORTALITY.—CITY DISTRICTS.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	712	.7125	140.35	60	52135	2070	3.9706	25.19
19	99288	718	.7232	138.27	61	50065	2124	4.2431	23.56
20	98570	723	.7340	136.24	62	47941	2167	4.5201	22.12
21	97847	739	.7555	132.36	63	45774	2205	4.8129	20.77
22	97108	754	.7764	128.79	64	43569	2229	5.1178	19.53
23	96354	768	.7969	125.48	65	41340	2246	5.4348	18.27
24	95586	790	.8168	120.94	66	39094	2253	5.7638	17.34
25	94796	802	.8363	118.16	67	36841	2207	5.9909	16.69
26	93994	804	.8553	116.91	68	34634	2118	6.1161	16.35
27	93190	813	.8727	114.58	69	32516	1996	6.1396	16.28
28	92377	821	.8886	112.53	70	30520	1849	6.0608	16.49
29	91556	827	.9032	110.71	71	28671	1685	5.8802	17.00
30	90729	831	.9163	109.13	72	26986	1559	5.7922	17.26
31	89898	846	.9279	107.77	73	25427	1478	5.8148	17.19
32	89052	846	.9506	105.19	74	23949	1420	5.9301	16.86
33	88206	868	.9844	101.58	75	22529	1384	6.1440	16.27
34	87338	902	1.0293	96.70	76	21145	1364	6.4565	15.48
35	86436	938	1.0854	92.13	77	19781	1513	7.6503	13.67
36	85498	985	1.1526	86.76	78	18268	1614	8.8441	11.30
37	84513	1025	1.2137	82.52	79	16654	1670	10.0379	9.95
38	83488	1059	1.2687	78.82	80	14984	1529	11.2317	9.79
39	82429	1086	1.3176	75.89	81	13455	1671	12.4255	8.04
40	81343	1106	1.3604	73.55	82	11784	1604	13.6193	7.33
41	80237	1121	1.3971	71.57	83	10180	1507	14.8132	6.75
42	79116	1139	1.4403	69.58	84	8673	1484	17.1147	5.84
43	77977	1162	1.4901	67.10	85	7189	1396	19.4162	5.15
44	76815	1188	1.5465	64.66	86	5793	1253	21.7177	4.60
45	75627	1217	1.6095	62.13	87	4540	1117	24.0192	4.06
46	74410	1247	1.6790	59.55	88	3423	901	26.3207	3.79
47	73163	1286	1.7581	56.87	89	2522	717	28.4386	3.51
48	71877	1327	1.8466	54.15	90	1805	552	30.5565	3.27
49	70550	1372	1.9448	51.41	91	1253	418	32.6744	2.99
50	69178	1420	2.0528	48.71	92	835	290	34.7923	2.87
51	67758	1470	2.1705	46.49	93	545	201	36.9102	2.70
52	66288	1527	2.3057	43.88	94	344	137	39.9840	2.50
53	64761	1592	2.4584	40.67	95	207	89	43.0578	2.32
54	63169	1660	2.6289	38.04	96	118	54	46.1316	2.16
55	61509	1732	2.8169	35.50	97	64	31	49.2054	2.03
56	59777	1806	3.0223	33.08	98	33	17	52.2792	1.91
57	57971	1878	3.2403	30.86	99	16	8	54.8971	1.83
58	56093	1947	3.4710	28.81	100	8	8	100.0000	1.00
59	54146	2011	3.7144	26.92					

TABLE XI.

MORTALITY.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	867	.8673	115.30	60	57868	1890	3.2681	30.61
19	99133	848	.8553	116.91	61	55978	1982	3.5419	28.23
20	98285	829	.8434	118.56	62	53996	2046	3.7898	26.38
21	97456	799	.8195	122.20	63	51950	2115	4.0720	24.55
22	96657	773	.7997	125.10	64	49835	2177	4.3683	22.89
23	95884	752	.7842	127.50	65	47658	2230	4.6787	21.37
24	95132	735	.7728	129.39	66	45428	2281	5.0215	19.91
25	94397	723	.7658	130.58	67	43147	2305	5.3430	18.71
26	93674	714	.7629	131.07	68	40842	2329	5.7032	17.53
27	92960	710	.7639	130.90	69	38513	2339	6.0822	16.44
28	92250	709	.7689	130.05	70	36174	2344	6.4799	15.43
29	91541	712	.7778	128.56	71	33830	2332	6.8942	14.50
30	90829	718	.7907	126.47	72	31498	2325	7.3866	13.53
31	90111	727	.8075	123.83	73	29173	2316	7.9389	12.59
32	89384	741	.8289	120.64	74	26857	2304	8.5572	11.65
33	88643	758	.8550	116.95	75	24553	2269	9.2415	10.82
34	87885	778	.8859	112.87	76	22284	2226	9.9897	10.01
35	87107	802	.9213	108.54	77	20058	2157	10.7554	9.29
36	86305	830	.9613	104.02	78	17901	2044	11.4187	8.75
37	85475	854	.9994	100.06	79	15857	1918	12.0955	8.26
38	84621	876	1.0353	96.59	80	13939	1784	12.7978	7.81
39	83745	895	1.0692	93.52	81	12155	1632	13.4336	7.44
40	82850	912	1.1011	90.81	82	10523	1512	14.3744	6.95
41	81938	927	1.1309	88.42	83	9011	1404	15.5802	6.41
42	81011	929	1.1468	87.19	84	7607	1297	17.0509	5.86
43	80082	968	1.2089	82.71	85	6310	1185	18.7867	5.32
44	79114	994	1.2570	79.55	86	5125	1114	20.7474	4.59
45	78120	1024	1.3117	76.23	87	4011	909	22.6797	4.40
46	77096	1055	1.3723	72.87	88	3102	765	24.6690	4.05
47	76041	1093	1.4386	69.51	89	2337	619	26.4857	3.77
48	74948	1132	1.5104	66.20	90	1718	486	28.3024	3.53
49	73816	1172	1.5877	62.98	91	1232	371	30.1191	3.32
50	72644	1213	1.6707	59.85	92	861	269	31.9358	3.13
51	71431	1270	1.7791	56.20	93	592	200	33.7527	2.96
52	70161	1306	1.8628	53.68	94	392	144	36.7621	2.72
53	68855	1364	1.9818	50.40	95	248	99	39.7715	2.51
54	67491	1407	2.1170	48.00	96	149	64	42.7809	2.33
55	66084	1458	2.2076	45.29	97	85	39	45.7903	2.18
56	64626	1572	2.4325	42.06	98	46	23	48.7996	2.00
57	63054	1648	2.6152	38.77	99	23	12	51.7990	1.93
58	61406	1729	2.8157	35.51	100	11	11	100.0000	1.00
59	59677	1809	3.0328	33.04					

The rate of mortality having been obtained, as stated in a preceding paragraph, Tables VIII., IX., X., and XI. were calculated therefrom. Another mode of calculation might have been adopted, similar to the one made use of by Mr. Farr in his letter to the Registrar General, as well as by other actuaries, but it was considered that, by the class of persons for whom these tables were intended, the method adopted would be most easily understood.

In the English Life Table, we find between 45-6 that one-fourth of the lives out of 100,000, at age 18, have died off; and that between the ages 62-3, one-half of the lives have disappeared. In the experience of the Unity, for rural, town, and city districts combined, 1846-8, one-half of the lives died away between ages 18 and 63-4. Taking the present experience of the Manchester Unity, rural districts, one-fourth die off between ages 18 and 50-1, and one-half between ages 18 and 67-8, showing an increased vitality of four in the former, and five years in the latter instance. One-fourth of the members in the town districts die off between ages 18 and 48-9, and one-half between the ages 18 and 64-5, showing a vitality over the English Life Table of two years respectively. In the city districts, of 1856-60, it will be seen that one-fourth of the lives have passed away between ages 18 and 45-6, and one-half between ages 18 and 61-2, showing in each instance a lower vitality of one year.

In the early period of the table, age 20, the rural class shows a higher rate of mortality than the English Life Table; but at the other periods, 30, 40, 50, and 60, the mortality per cent. is greater in the English Table. The town districts show a less rate of mortality at each of the ages given: the city districts show a less rate of mortality at the periods 20 and 30, and at the other periods the rate is higher than the English Life Table. When the three districts are combined, the rate of mortality is higher in the Manchester Unity, 1856-60, at the ages 20 and 60; and at the other ages, 30, 40, and 50, the rate is less per cent. than appears in the English Life Table.

The following tabular form will give at one view the rate of mortality for each of the following decennial periods of life:—

Age.	English Table.	Rural.	Town.	City.	Rural, Town, & City.
20	.8131	.8752	.7994	.7340	.8434
30	.9783	.7409	.7723	.9163	.7907
40	1.2695	.8978	1.0736	1.3604	1.1011
50	1.8109	1.2606	1.6527	2.0528	1.6707
60	3.2636	2.3713	3.1238	3.9706	3.2681

It is now intended to examine the rate of mortality experienced by members of the Manchester Unity, 1856-60, in comparison with the experience of the Friendly Societies, given in the tables of Messrs. Finlaison and Neison, and likewise with the experience of the Unity, from data of 1846-8. The following table shows the rate of mortality at the period given, according to the above-named data:—

Age.	Mr. Neison.	Manchester Unity, 1846-8	Mr. Finlaison.	Manchester Unity, 1856-60
20	.6758	.6034	.74	.8434
30	.7563	.8338	.77	.7907
40	.9386	1.0507	1.03	1.1011
50	1.4267	1.7630	1.50	1.6707
60	2.5054	3.5293	2.61	3.2681

It has been previously stated that the results given by Mr. Finlaison do not include miners, colliers, and mariners. Taking, then, the experience on the conditions named, it appears the rate of mortality is greatest in the Manchester Unity, 1856-60, at age 20, and least in the Unity from the experience of 1846-8. At the next period, age 30, the rate of mortality is greatest from the experience of the Unity, 1846-8, and the least from the results obtained by Mr. Neison. At age 40, the highest rate of mortality is indicated by the experience of the Unity, 1856-60, and least by the experience of Mr. Neison. At ages 50 and 60, the rate of mortality is least by the results of Mr. Neison, and the highest in those of the Unity for 1846-8.

Taking the aggregate rate of mortality for these periods, and taking also into consideration the omission of miners, &c., from the results of Mr. Finlaison, it will be seen how closely the results of Messrs. Neison and Finlaison approximate to each other; the first showing an aggregate of 6.3028 per cent., and the latter 6.65 per cent. Again, comparing the aggregate for the Manchester Unity of each experience, we find the same to be 7.7802 per cent. for 1846-8, and 7.6740 per cent. for 1856-60, in each case showing a higher aggregate rate of mortality than is shown by Mr. Neison or Mr. Finlaison.

The rate of mortality in the rural districts, taking the aggregate of the following five periods, is least according to the experience of Mr. Neison, and greatest in that of the Manchester Unity, 1846-8; the figures respectively being 5.607 per cent. according to Mr. Neison, and 7.0576 per cent. according to the Manchester Unity.

Age.	Neison.	Unity, 1846-8.	Finlaison.	Unity, 1856-60.
20	.739	.6736	.66	.8752
30	.711	.7610	.72	.7409
40	.797	.8831	.85	.8978
50	1.200	1.4553	1.29	1.2606
60	2.160	3.2846	2.27	2.3713
	5.607	7.0576	5.79	6.1458

The rate of mortality in the Rural Districts, at the age 20, appears greatest in the Manchester Unity, 1856-60; at the next period, age 30, the rate is greatest in the Unity, from the experience of 1846-8; at age 40, the rate of mortality is again highest in the Unity, from the experience of 1856-60; and at the next two periods, age 50 and 60, the rate of mortality is highest, from the experience of the Unity, 1846-8.

The least rate of mortality, at age 20, appears, from the experience of Mr. Finlaison, and at the next four periods, ages 30, 40, 50, and 60, the rate of mortality is least from the data obtained by Mr. Neison.

In the Town Districts, the aggregate rate of mortality, for the following five periods, is highest from the experience of the Unity in 1846-8, and least from that of Mr. Neison, as may be seen from the following Table:—

Age.	Neison.	Unity, 1846-8.	Finlaison.	Unity, 1860.
20	.535	.7816	.93	.7994
30	.740	.7294	.78	.7723
40	.960	1.0273	1.08	1.0736
50	1.627	1.6023	1.71	1.6527
60	3.273	3.8488	2.84	3.1238
	7.135	7.9894	7.34	7.4218

At the three periods, ages 30, 40, and 50, the experience of Mr. Finlaison gives the highest rate of mortality; for the period, age 30, the Unity of 1846-8 exhibits the lowest rate; at age 40, the rate of mortality is lowest, according to the data of Mr. Neison, and at the next period, age 50, in that of the Unity for 1846-8; at age 60, the highest rate of mortality is experience by the Unity of 1846-8, and the lowest by the lives of Mr. Finlaison.

Taking, first, the rural districts, it will be seen, that although some occasional variations may appear, the highest aggregate rate of mortality is invariably less than the lowest aggregate mortality in any of the town class; and that the lowest aggregate mortality of any experience in the city class is higher than the aggregate of any of the town class; and taking any experience, there appears a higher aggregate rate of mortality in one class over the other, there being no variation from the rule. We now proceed to give the rate of mortality for the same periods for the city districts:—

Age.	Neison.	Unity, 1846-8.	Finlaison.	Unity, 1856-60.
20	.6446	.4383	1.07	.7340
30	.9280	.9761	.97	.9163
40	1.4009	1.3334	1.63	1.3604
50	1.9397	2.3772	1.82	2.0528
60	3.0463	2.8834	3.35	3.9706
	7.9595	8.0084	8.84	9.0341

In the above Table, and at the age 20, the highest rate of mortality appears from the experience of Mr. Finlaison; at the next period, age 30, in the Unity, from the experience of 1846-8; at the following period, age 40, Mr. Finlaison's lives show the highest rate of mortality, and at the other two periods, ages 50 and 60, the highest rate is in the experience of the Manchester Unity for the years 1846-8 and 1856-60.

The least rate of mortality, at age 20, is experienced by the Manchester Unity, 1846-8; at the next period, age 30, by the Manchester Unity from the data of 1856-60, at the period, age 40, by the Unity of 1846-8; at the period, age 50, by the data of Mr. Finlaison; and at the last period, age 60, the least rate of mortality appears in the Manchester Unity, 1846-8.

Taking the aggregate mortality for the five periods, ages 20, 30, 40, 50, and 60, the highest aggregate appears, from the experience of the Unity, 1856-60; the next highest from that of Mr. Finlaison, the Manchester Unity for 1846-8 being the next, and the aggregate mortality, from the experience of Mr. Neison, being the lowest.

If reference be made to Table XV., it is apparent that the rate of mortality is very much influenced by the trade or occupation of the members; and, making some allowance for the fluctuation of the rate of mortality experienced in certain trades, on account of the limited data, it is still very evident that trade or occupation has a greater effect than locality on the rate of mortality, and also on the average sickness. Taking an aggregate of five given periods, as in Table XV., eight of those trades show a greater mortality than the city districts of the Manchester Unity; and taking other trades, a less rate of mortality and average sickness appears than in the rural districts. Then taking the trade showing the *highest* rate of mortality, or highest aggregate sickness, and comparing the same with the

trade experiencing the least rate of mortality or aggregate sickness, a greater difference appears than in any of the districts affected by locality.

Age.	Manchester Unity, 1846-8.	Finlaison.	Manchester Unity, 1860.
20	.6034	.74	.8434
30	.8338	.77	.7907
40	1.0507	1.03	1.1011
50	1.7630	1.50	1.6707
60	3.5293	2.61	3.2688

If the specific intensity appearing in the various class now be noticed, it will be seen, that at age 20, according to the English Life Table, one member dies out of every 123, taking whole numbers; in the rural districts, one out of 114; in the town districts, one out of 125; city districts, one out of 136; and in the three districts combined, one out of each 118 members. Taking age 30, and in the same order, we find English Life Table, one in 102; rural, one in 134; town, one in 129; city, in 109; and rural, town, and city combined, one in 109. At age 40, the specific intensity is greatest in rural districts, one member dying out of 111; it is next greatest in the districts combined, one member dying out of every 91; and the English Life Table shows one death to every 78 living. If the specific intensity be noticed in the English Life Table, it is shown to decrease year by year to the end of the table. In the rural districts, the specific intensity increases from age 18 up to age 25, from that period there is a decrease to the end of the table. In the town districts, the specific intensity appears similar to the rural districts, exhibiting a regular increase up to the age 26. From that year of life the specific intensity decreases to the end of life. In the city districts, the specific intensity is greatest at age 18, when one member dies out of every 140; and from that age the intensity declines to the end of the table.

The following Table has been prepared to show the Expectation or Mean after Life-time. For the information of many who may not understand its meaning, it may be as well to state, that, taking a number of persons, say, for example, 100 at age 30, from the past experience of the Manchester Unity, Rural, Town, and City Districts, the mean after life-time being at that age 34.15, these 100 members should live altogether 3415 years. Some may live one year, others two years, some 35, others 36; but when all the lives are extinct, if the number of years each person has lived be added together, and divided by the number observed upon, it would have given an average duration of life of 34.15 years, and that which has taken place, it is presumed, will, under similar circumstances, again take place.

TABLE XII.

EXPECTATION OR AFTER LIFE-TIME. — RURAL, TOWN, AND CITY DISTRICTS, AND THE THREE DISTRICTS COMBINED.

Age.	Rural.	Town.	City.	Rural, Town, and City.	Age.	Rural.	Town.	City.	Rural, Town, and City.
18	44.85	42.59	40.90	42.41	49	22.68	20.55	19.84	20.80
19	44.27	41.94	40.23	41.81	50	21.95	19.87	19.18	19.98
20	43.56	41.29	39.52	41.18	51	21.22	19.19	18.62	19.31
21	43.05	40.62	38.80	40.61	52	20.50	18.52	18.02	18.65
22	42.29	39.93	38.10	39.75	53	19.78	17.86	17.43	18.10
23	41.72	39.23	37.39	39.15	54	19.06	17.20	16.86	16.33
24	41.03	38.52	36.69	38.55	55	18.35	16.55	16.30	15.70
25	40.32	37.80	35.99	37.76	56	17.64	15.91	15.76	15.41
26	39.60	37.08	35.29	37.05	57	16.92	15.27	15.24	15.14
27	38.89	36.34	34.59	36.33	58	16.47	14.65	14.80	14.87
28	38.17	35.60	33.89	35.61	59	16.52	14.04	14.24	14.28
29	37.45	34.86	33.19	34.88	60	14.84	13.39	13.77	13.72
30	36.72	34.12	32.49	34.15	61	14.19	12.86	13.01	13.16
31	35.99	33.38	31.78	33.45	62	13.57	12.28	12.89	12.63
32	35.26	32.65	31.08	32.68	63	12.97	11.73	12.47	12.10
33	34.64	31.91	30.38	31.95	64	12.38	11.21	12.08	11.60
34	33.78	31.18	29.67	31.22	65	11.79	10.69	11.71	11.10
35	33.09	30.45	28.98	30.71	66	11.19	10.19	11.35	10.62
36	32.31	29.73	28.29	29.78	67	10.59	9.70	11.01	10.16
37	31.57	29.02	27.61	29.02	68	10.00	9.24	10.71	9.71
38	30.84	28.28	26.95	28.35	69	9.43	8.79	10.35	9.26
39	30.11	27.56	26.23	27.64	70	8.89	8.36	9.90	8.83
40	29.38	26.85	25.63	26.93	71	8.41	7.94	9.60	8.41
41	28.11	26.02	24.98	26.23	72	7.98	7.54	9.20	7.99
42	27.35	25.48	24.33	25.52	73	7.60	7.17	8.71	7.59
43	27.12	24.72	23.67	24.81	74	7.24	6.81	8.21	7.20
44	26.37	24.01	23.02	24.11	75	6.89	6.49	7.70	6.83
45	25.65	23.31	22.38	23.41	76	6.54	6.21	7.17	6.64
46	25.19	22.61	21.74	22.77	77	6.17	5.95	6.63	6.14
47	24.15	21.92	21.10	22.02	78	5.80	5.73	6.14	5.82
48	23.41	21.34	20.42	21.34	79	5.43	5.52	5.69	5.51

It will be seen, if reference is made to the English Life Table, that the expectation in the Rural Districts of the Manchester Unity of 1856-60, is highest at every age of life, from the first to the last in the table.

At age 20 the difference is 3.57

„	30	„	3.51
„	40	„	2.92
„	50	„	2.08
„	60	„	1.24

In the Town Districts, the expectation is also higher up to age 50. After that age, the expectation is greater in the English Life Table than in the town districts of the Unity.

At age 20, expectation greater in Town Districts, 1.30

"	30,	"	"	.91
"	40,	"	"	.39
"	50,	"	equal	.00
"	60,	"	less	.21

In the City Districts, the expectation is less at the periods 20, 30, 40, and 50, and greater at the period 60. The following table shows the extent of the variation.

At age 20, expectation in City Districts, less, .47

"	30,	"	"	.72
"	40,	"	"	.83
"	50,	"	"	.69
"	60,	"	more	.17

When the whole of the districts are combined, the expectation is favourable to the Manchester Unity. It is greatest at the early ages, and decreasing with increased years, as shown in the following tabular statement:—

At age 20, difference in favour of the Unity, 1.19

"	30,	"	"	.94
"	40,	"	"	.47
"	50,	"	"	.11
"	60,	"	"	.12
"	70,	"	"	.28

If the results of the data of 1846-8, rural, town, and city districts, be now referred to, it will be seen the expectation at age 70 is more favourable than is shewn from the experience of 1856-60; but at all other periods, the expectation is less in the first named.

At age 20, difference in favour of 1856-60, .26

"	30,	"	"	.45
"	40,	"	"	.52
"	50,	"	"	.58
"	60,	"	"	.43
"	70,	"	against	.17

AFTER LIFE-TIME, ENGLISH LIFE TABLE.—MANCHESTER UNITY RURAL, TOWN, AND CITY, 1846-8, MANCHESTER UNITY, 1860, AND MR. NELSON.

Age.	English Table.	Manchester Unity, 1846-8.	Manchester Unity, 1860.	Mr. Nelson.
20	39.99	40.92	41.18	43.77
30	33.21	33.70	34.15	36.60
40	26.46	26.41	26.93	29.33
50	19.87	19.40	19.98	22.19
60	13.60	13.29	13.72	15.69
70	8.55	9.09	8.83	10.20

AVERAGE AMOUNT OF SICKNESS EXPERIENCED IN THE MANCHESTER UNITY.

In Tables IV., V., VI., and VII., the second column shews the number of persons of each year of life, and the seventh column, the amount of sickness experienced by those persons in passing through that year. The results are given in weeks, and decimal fractions of a week. Of the columns next adjacent, one contains the number of persons at each period of five years, and the other the amount of sickness experienced by those persons for the same period of life. Such amount of sickness being divided by the number of members, gives the average amount of sickness per annum experienced for the mean age opposite to which it is placed. This average amount of sickness per annum conveys a just idea of the gradual increasing rate of sickness to which persons are subject as they advance in years.

The following Table gives the average amount of sickness experienced by Friendly Societies in England and Wales—males. The rural districts comprise the parts of England and Wales not contained in the two following divisions. The town districts comprise places containing above 3,000 and not less than 65,000 inhabitants. The city districts comprise corporate towns containing more than 65,000 inhabitants, with a density of population not less than $6\frac{1}{2}$ persons to one house.*

TABLE XIII.

ADJUSTED AVERAGE AMOUNT OF SICKNESS AMONG MEMBERS OF FRIENDLY SOCIETIES—
RURAL, TOWN, AND CITY DISTRICTS, AND THE THREE DISTRICTS COMBINED.—ENGLAND
AND WALES, FROM MR. FINLAISON'S REPORT—MALES.

Age.	Rural.		Town.		City.		Rural, Town, and City.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
18	.9691=	0 6 19	.9860=	0 6 22	1.0881=	1 0 15	.9756=	0 6 20
19	.9779=	0 6 20	1.0039=	1 0 1	1.0686=	1 0 12	.9865=	0 6 22
20	.9833=	0 6 21	.9850=	0 6 21	.9720=	0 6 19	.9833=	0 6 21
21	.9937=	0 6 23	.9763=	0 6 20	.9297=	0 6 12	.9865=	0 6 22
22	.9932=	0 6 23	.9791=	0 6 20	.9064=	0 6 8	.9847=	0 6 21
23	.9943=	0 6 23	.9692=	0 6 19	.8850=	0 6 5	.9802=	0 6 21
24	.9943=	0 6 23	.9691=	0 6 19	.8334=	0 5 20	.9749=	0 6 20
25	.9972=	1 0 0	.9687=	0 6 19	.8428=	0 5 22	.9756=	0 6 20
26	.9969=	1 1 0	.9678=	0 6 19	.8742=	0 6 3	.9768=	0 6 20
27	1.0051=	1 0 1	.9770=	0 6 20	.8926=	0 6 6	.9853=	0 6 21
28	1.0173=	1 0 3	.9713=	0 6 19	.9197=	0 6 10	.9928=	0 6 23
29	1.0188=	1 0 3	.9653=	0 6 18	.9282=	0 6 12	.9920=	0 6 23
30	1.0145=	1 0 2	.9636=	0 6 18	.9211=	0 6 11	.9874=	0 6 22
31	1.0067=	1 0 1	.9559=	0 6 16	.9233=	0 6 11	.9803=	0 6 21
32	1.0072=	1 0 1	.9363=	0 6 13	.9034=	0 6 9	.9714=	0 6 19
33	1.0086=	1 0 1	.9552=	0 6 17	.8941=	0 6 6	.9766=	0 6 20
34	1.0217=	1 0 4	.9782=	0 6 20	.9253=	0 6 11	.9950=	0 6 23
35	1.0395=	1 0 7	1.0100=	1 0 2	.9669=	0 6 18	1.0203=	1 0 4
36	1.0736=	1 0 12	1.0613=	1 0 10	.9927=	0 6 23	1.0586=	1 0 10
37	1.0951=	1 0 16	1.1046=	1 0 18	1.0458=	1 0 8	1.0913=	1 0 15
38	1.1253=	1 0 21	1.1331=	1 0 22	1.0619=	1 0 10	1.1190=	1 0 20
39	1.1446=	1 1 0	1.1457=	1 1 0	1.1133=	1 0 19	1.1406=	1 1 0
40	1.1800=	1 1 6	1.1739=	1 1 5	1.1459=	1 1 1	1.1733=	1 1 5

* Colliers, Miners, and Mariners are not included.

Age.	Rural.			Town.			City.			Rural, Town, and City.		
	Weeks.	W. D. H.		Weeks.	W. D. H.		Weeks.	W. D. H.		Weeks.	W. D. H.	
41	1.2194=	1 1 13		1.1796=	1 1 6		1.1741=	1 1 5		1.2005=	1 1 10	
42	1.2402=	1 1 16		1.2003=	1 1 10		1.2369=	1 1 16		1.2270=	1 1 14	
43	1.2508=	1 1 18		1.2297=	1 1 15		1.3030=	1 2 3		1.2512=	1 1 18	
44	1.2965=	1 2 2		1.2717=	1 1 22		1.3292=	1 2 7		1.2930=	1 2 1	
45	1.3329=	1 2 8		1.3218=	1 2 6		1.3678=	1 2 14		1.3341=	1 2 8	
46	1.3566=	1 2 12		1.3790=	1 2 16		1.4120=	1 2 21		1.3712=	1 2 14	
47	1.4125=	1 2 21		1.4738=	1 3 8		1.4456=	1 3 3		1.4367=	1 3 1	
48	1.4800=	1 3 9		1.5413=	1 3 19		1.4962=	1 3 11		1.5021=	1 3 12	
49	1.5290=	1 3 17		1.6481=	1 4 13		1.5679=	1 3 23		1.5731=	1 4 0	
50	1.5805=	1 4 0		1.7318=	1 5 3		1.6620=	1 4 15		1.6409=	1 4 12	
51	1.6403=	1 4 12		1.8369=	1 5 21		1.7247=	1 5 2		1.7163=	1 5 0	
52	1.6902=	1 4 20		1.9324=	1 6 13		1.7793=	1 5 11		1.7823=	1 5 11	
53	1.7387=	1 5 4		2.0362=	2 0 6		1.8654=	1 6 1		1.8554=	1 6 0	
54	1.7919=	1 5 13		2.1125=	2 0 19		1.9094=	1 6 9		1.9155=	1 6 10	
55	1.8551=	1 6 0		2.2181=	2 1 13		1.9594=	1 6 17		1.9922=	1 6 23	
56	1.9376=	1 6 14		2.3553=	2 2 12		2.0088=	2 0 1		2.0898=	2 0 15	
57	2.0448=	2 1 8		2.4230=	2 2 23		2.0605=	2 0 10		2.1768=	2 1 6	
58	2.1994=	2 1 10		2.5532=	2 3 21		2.1747=	2 1 5		2.3184=	2 2 6	
59	2.3732=	2 2 15		2.7263=	2 5 2		2.3245=	2 2 7		2.4904=	2 3 14	
60	2.5995=	2 4 5		2.8667=	2 6 2		2.4624=	2 3 6		2.6764=	2 4 18	
61	2.8271=	2 5 19		3.0137=	3 0 2		2.7328=	2 5 3		2.8816=	2 6 4	
62	3.0948=	3 0 16		3.2155=	3 1 12		2.9359=	2 6 13		3.1181=	3 0 20	
63	3.3450=	3 2 8		3.4627=	3 3 6		3.0860=	3 0 14		3.3550=	3 2 12	
64	3.6588=	3 4 15		3.7074=	3 4 23		3.2998=	3 2 2		3.6315=	3 4 10	
65	3.9576=	3 6 17		3.9710=	3 6 19		3.5231=	3 3 16		3.9080=	3 6 9	
66	4.3547=	4 2 12		4.2952=	4 2 2		3.7249=	3 5 2		4.2556=	4 1 19	
67	4.7284=	4 5 2		4.6903=	4 4 20		3.9817=	3 6 21		4.6220=	4 4 9	
68	5.2061=	5 1 11		5.1233=	5 0 21		4.2629=	4 1 24		5.0605=	5 0 10	
69	5.7576=	5 5 7		5.6538=	5 4 14		4.6236=	4 4 9		5.5808=	5 4 2	
70	6.4137=	6 2 21		6.4238=	6 2 23		4.9388=	4 6 14		6.2359=	6 1 16	
71	7.1080=	7 0 18		7.1731=	7 1 5		5.1770=	5 1 6		6.8829=	6 6 4	
72	7.9865=	7 6 22		7.9420=	7 6 15		5.5972=	5 4 4		7.6683=	7 4 16	
73	8.8664=	8 6 2		8.6600=	8 4 15		6.2453=	6 1 17		8.4747=	8 3 8	
74	9.4596=	9 3 5		9.2980=	9 2 2		6.3252=	6 2 7		9.0403=	9 0 7	
75	10.0652=	10 0 8		9.7302=	9 5 3		6.2831=	6 2 0		9.5446=	9 3 19	
76	10.7217=	10 5 1		10.5242=	10 3 16		6.4764=	6 3 8		10.2119=	10 1 12	
77	11.4221=	11 2 23		11.9419=	11 6 14		6.7465=	6 5 5		11.0561=	11 0 9	
78	12.1762=	12 1 6		13.2336=	13 1 15		6.4801=	6 3 9		11.8454=	11 1 17	
79	13.2442=	13 1 17		15.0202=	15 0 4		6.9598=	6 6 17		12.9983=	13 0 0	
80	13.9237=	13 6 11		16.8720=	16 6 3		7.7857=	7 5 12		13.9547=	13 6 16	
81	14.6323=	14 4 10		17.5602=	17 3 22		8.8296=	8 5 20		14.6921=	14 4 20	
82	15.1100=	15 0 18		17.8819=	17 6 4		8.9775=	8 6 20		15.1491=	15 1 1	
83	15.1686=	15 1 4		18.0411=	18 0 7		8.1894=	8 1 8		15.1968=	15 1 9	
84	14.6378=	14 4 11		15.0897=	15 0 15		6.4630=	6 3 6		14.2041=	14 1 10	

The mean average sickness per annum having been obtained, as stated in a preceding paragraph, the same course was adopted with regard to sickness as stated, at page 33, relative to mortality. By taking the difference of the sickness for the five years, dividing it by 5 to give the first adjusted results, then adding the two upper and two lower terms to the middle term, and placing such amount opposite the middle term and again dividing by 5, gave the adjusted results as shewn in the following tables. It may be as well to observe, that the difference between the first and second results varied only to a very small extent. It must be remembered, that in the average rate of sickness given by Mr. Finlaison, he omitted colliers, miners, and mariners, having formed them into a separate table.

TABLE XIV.

AVERAGE SICKNESS PER ANNUM TO EACH PERSON IN RURAL, TOWN, AND CITY DISTRICTS,
AND IN THE THREE DISTRICTS COMBINED. MANCHESTER UNITY,

Age.	Rural.		Town.		City.		Rural, Town, and City.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
18	.8390=	0 5 21	.8766=	0 6 3	.8162=	0 5 17	.8265=	0 5 19
19	.8388=	0 5 21	.8652=	0 6 1	.8157=	0 5 17	.8263=	0 5 19
20	.8386=	0 5 21	.8538=	0 5 23	.8152=	0 5 17	.8260=	0 5 19
21	.8383=	0 5 21	.8423=	0 5 22	.8142=	0 5 17	.8253=	0 5 19
22	.8389=	0 5 21	.8331=	0 5 20	.8119=	0 5 16	.8240=	0 5 19
23	.8422=	0 5 21	.8262=	0 5 19	.8089=	0 5 16	.8234=	0 5 19
24	.8426=	0 5 22	.8215=	0 5 18	.8045=	0 5 15	.8218=	0 5 18
25	.8458=	0 5 22	.8190=	0 5 18	.7991=	0 5 14	.8198=	0 5 18
26	.8518=	0 5 23	.8148=	0 5 17	.7924=	0 5 13	.8173=	0 5 17
27	.8568=	0 6 0	.8204=	0 5 18	.7898=	0 5 13	.8178=	0 5 16
28	.8608=	0 6 1	.8239=	0 5 19	.7911=	0 5 13	.8212=	0 5 18
29	.8677=	0 6 2	.8293=	0 5 20	.7965=	0 5 14	.8273=	0 5 19
30	.8760=	0 6 3	.8366=	0 5 21	.8059=	0 5 15	.8367=	0 5 21
31	.8851=	0 6 5	.8462=	0 5 22	.8193=	0 5 18	.8488=	0 5 23
32	.8978=	0 6 7	.8622=	0 6 1	.8381=	0 5 21	.8659=	0 6 0
33	.9141=	0 6 10	.8884=	0 6 5	.8624=	0 6 1	.8979=	0 6 7
34	.9341=	0 6 13	.9136=	0 6 9	.8922=	0 6 6	.9148=	0 6 10
35	.9577=	0 6 17	.9496=	0 6 16	.9275=	0 6 12	.9467=	0 6 15
36	.9849=	0 6 21	.9910=	0 6 22	.9682=	0 6 19	.9834=	0 6 21
37	.9998=	1 0 0	1.0155=	1 0 3	1.0118=	1 0 2	1.0218=	1 0 4
38	1.0306=	1 0 5	1.0428=	1 0 7	1.0583=	1 0 10	1.0620=	1 0 10
39	1.0491=	1 0 8	1.0731=	1 0 12	1.1078=	1 0 18	1.1040=	1 0 17
40	1.0653=	1 0 11	1.1218=	1 0 20	1.1602=	1 1 3	1.1478=	1 1 1
41	1.0816=	1 0 14	1.1819=	1 1 7	1.2155=	1 1 12	1.1933=	1 1 8
42	1.1089=	1 0 18	1.2580=	1 1 19	1.2604=	1 1 20	1.2424=	1 1 17
43	1.1494=	1 1 1	1.3339=	1 2 8	1.2948=	1 2 2	1.2951=	1 2 2
44	1.2011=	1 1 10	1.4098=	1 2 21	1.3188=	1 2 6	1.3512=	1 2 11
45	1.2640=	1 1 20	1.4655=	1 3 6	1.3324=	1 2 8	1.4110=	1 2 21
46	1.3361=	1 2 8	1.5211=	1 3 16	1.3556=	1 2 12	1.4760=	1 3 8
47	1.4174=	1 2 22	1.5846=	1 4 2	1.3845=	1 2 17	1.5521=	1 3 21
48	1.5063=	1 3 13	1.6560=	1 4 14	1.4791=	1 3 8	1.6391=	1 4 11
49	1.6025=	1 4 5	1.7352=	1 5 4	1.6196=	1 4 8	1.7371=	1 5 4
50	1.7063=	1 4 23	1.8023=	1 5 15	1.8053=	1 5 15	1.8461=	1 5 22
51	1.8176=	1 5 17	1.9172=	1 6 10	2.0379=	2 0 6	1.9641=	1 6 18
52	1.9327=	1 6 13	2.0384=	2 0 6	2.2692=	2 1 21	2.1005=	2 0 17
53	2.0541=	2 0 9	2.1861=	2 1 7	2.5000=	2 3 12	2.2550=	2 1 19
54	2.1827=	2 1 7	2.3601=	2 2 13	2.7301=	2 5 3	2.4278=	2 3 2
55	2.3177=	2 2 5	2.5606=	2 3 22	2.9597=	2 6 14	2.6189=	2 4 8
56	2.4759=	2 3 8	2.7874=	2 5 12	3.1886=	3 1 8	2.8283=	2 5 19
57	2.6332=	2 4 14	3.0496=	3 0 8	3.4129=	3 2 21	3.0730=	3 0 12
58	2.7465=	2 5 5	3.3470=	3 2 10	3.6366=	3 4 10	3.3529=	3 2 11
59	2.9710=	2 6 19	3.6798=	3 4 18	3.8597=	3 6 0	3.6681=	3 4 16
60	3.1715=	3 1 5	3.8879=	3 6 5	3.8582=	3 6 0	4.0245=	4 0 4
61	3.3853=	3 2 17	4.4912=	4 3 10	4.2741=	4 1 20	4.4040=	4 2 20
62	3.6750=	3 4 17	4.8815=	4 6 4	4.5710=	4 4 0	4.8150=	4 5 17
63	4.0430=	4 0 7	5.3388=	5 2 9	4.9490=	4 6 15	5.2517=	5 1 18

Age.	Rural.			Town.			City.			Rural, Town, and City.		
	Weeks.	W. D. H.		Weeks.	W. D. H.		Weeks.	W. D. H.		Weeks.	W. D. H.	
64	4.4889=	4 3 10		5.8231=	5 5 18		5.4079=	5 2 21		5.7139=	5 5 0	
65	5.0110=	5 0 2		6.3344=	6 2 8		5.9679=	5 6 19		6.2018=	6 1 10	
66	5.6175=	5 4 8		6.8726=	6 6 3		6.5888=	6 4 3		6.7152=	6 5 0	
67	6.3176=	6 2 5		7.5359=	7 3 18		7.2628=	7 1 20		7.3398=	7 2 9	
68	7.1136=	7 0 19		8.3238=	8 2 6		7.9903=	7 6 22		8.0757=	8 0 13	
69	8.0055=	8 0 1		9.2371=	9 1 16		8.7701=	8 5 9		8.9208=	8 6 11	
70	8.9933=	8 6 23		10.0749=	10 0 13		9.6034=	9 4 5		9.8772=	9 6 3	
71	10.0768=	10 0 13		10.8380=	10 5 21		10.4818=	10 3 9		10.9467=	10 6 15	
72	10.8377=	10 5 21		12.3692=	12 2 14		11.4689=	11 3 7		11.9843=	11 6 21	
73	11.3057=	11 2 3		13.2690=	13 1 21		12.5403=	12 3 9		12.9898=	12 6 21	
74	11.4510=	11 3 4		14.5373=	14 3 18		13.7044=	13 4 22		13.9653=	13 6 18	
75	11.2837=	11 2 0		15.7740=	15 5 10		14.1611=	14 1 2		14.9088=	14 6 9	
76	10.8060=	10 5 15		16.7992=	16 5 14		16.3103=	16 2 4		15.8183=	15 5 17	
77	10.7642=	10 5 8		17.7084=	17 4 23		17.5547=	17 3 21		16.6912=	16 4 20	
78	11.1587=	11 1 3		18.5617=	18 3 22		18.7004=	18 4 22		17.3276=	17 2 7	
79	11.9893=	11 6 22		19.3392=	19 2 9		19.7414=	19 5 4		18.3274=	18 2 7	
80	13.4560=	13 3 5		20.0408=	20 0 7		20.6796=	20 4 18		19.0907=	19 0 15	

In the Rural Districts, the sickness shows a very small increase at age 18 over that at age 21, and from that age to the end of the table a continued increase of average sickness is experienced. The same increase at age 18 appears in the Town District, but to a greater extent, the difference being .0618=0 week, 0 day, 10 hours per annum less sickness experienced at age 26 than age 18. After that age, a continued increase takes place up to the end of the table. In the City Districts, the decrease in sickness continues from age 18 up to age 27, the difference being .0264=4 hours per annum; and from that age there is a regular increase at every year of life, similar to the other districts. When these districts are combined, the average sickness decreases from .8265 to .8173 at age 26, being a difference of .0092=1½ hours per annum; and from this age, as in each of the separate districts, an increase takes place at every year of life.

In the Rural Districts of Mr. Finlaison's, the increase commences at age 18, and continues throughout the table. In the town and city districts, the difference, though small, is greater than that of the Manchester Unity; but in the districts when combined, a small difference appears between the ages 19 and 24, amounting to .0116=2 hours, and again, between ages 28 and 32, the difference being .0214=3½ hours per annum. After this latter age, the increase is continued through the table.

The following tabular statement shews the average sickness at each decennial period of life, from the experience of Mr. Finlaison, the experience of the Manchester Unity of 1846-8, and that of 1856-60.

AVERAGE SICKNESS EXPERIENCED BY MEMBERS OF FRIENDLY SOCIETIES IN ENGLAND AND WALES.—MALES.—MR. FINLAISON AND THOSE OF THE MANCHESTER UNITY, 1846-8 AND 1860; ALL RURAL, TOWN, AND CITY DISTRICTS.

Age.	Mr. Finlaison.		Manchester Unity, 1846-8.		Manchester Unity, 1860.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
20	.9833	= 0 6 21	.5849	= 0 4 2	.8260	= 0 5 9
30	.9874	= 0 6 22	.8034	= 0 5 15	.8367	= 0 5 21
40	1.1732	= 1 1 5	1.0779	= 1 0 13	1.1478	= 1 1 1
50	1.6409	= 1 4 12	1.8533	= 1 5 23	1.8461	= 1 5 22
60	2.6764	= 2 4 18	4.3985	= 4 2 19	4.0245	= 4 0 4
70	6.2359	= 6 1 16	9.5744	= 9 4 0	9.8772	= 9 6 3

In the early periods of life, it is very evident that the class of persons who form the Friendly Societies from which the Government returns have been obtained, experience a higher rate of sickness, but in a later period of life, they experience less average sickness than the members of the Unity. The returns for 1846-8 having been called for each separate and distinct year, it is very probable that members may have been returned, who were not entitled to benefits; and it is presumed the small sickness experienced at age 20 from that date is thus fully accounted for. Taking this circumstance into consideration, also that a period of 12 to 14 years have elapsed between the first and last returns being made, and likewise that during that period the Society must have been affected by a combination of circumstances, arising from the admission of members from other localities, and employed in other and different trades, it is surprising that no greater variation appears in the results derived from the different data.

To give a more general idea as to the sickness experienced, it has been considered advisable to give the aggregate sickness for various periods of life, as shown in the following tabular statement.

In many instances, where the aggregate sickness is given in weeks and decimal parts of a week, and in weeks, days, and hours, there appears an error of one hour, arising from a small loss at each reduction, but the true value is given in the totals.

COMPARATIVE VIEW OF SICKNESS, IN VARIOUS PERIODS OF YEARS, FROM THE EXPERIENCE OF FRIENDLY SOCIETIES.—MALES.—ENGLAND AND WALES, AND THE MANCHESTER UNITY RETURNS OF 1846-8 AND 1860.

MALES.—ENGLAND AND WALES.									
Age.	Rural.		Town.		City.		Rural, Town, and City.		
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	
20 to 30	9.9441=	9 6 15	9.7288=	9 5 2	8.9840=	8 6 21	9.8321=	9 5 20	
30 „ 40	10.5368=	10 3 18	10.2439=	10 1 17	9.7478=	9 5 5	10.3315=	10 2 8	
40 „ 50	13.2979=	13 2 2	13.4192=	13 2 22	13.4786=	13 3 8	13.3621=	13 2 13	
50 „ 60	18.8517=	18 5 23	21.9157=	21 6 10	19.4687=	19 3 7	19.9780=	19 6 20	
	52.6305=	52 4 10	55.3076=	55 2 4	51.6791=	51 4 18	53.5037=	53 3 13	
MANCHESTER UNITY, 1846-8.									
Age.	Rural.		Town.		City.		Rural, Town, and City.		
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	
20 to 30	7.0917=	7 0 15	7.0251=	7 0 4	6.8520=	6 5 23	7.0464=	7 0 7	
30 „ 40	8.4861=	8 3 9	9.2770=	9 1 22	9.6095=	9 4 6	9.0428=	9 0 7	
40 „ 50	12.3664=	12 2 13	13.0873=	13 0 14	16.4323=	16 3 0	13.7432=	13 5 4	
50 „ 60	24.3049=	24 2 3	25.5245=	25 3 16	32.7484=	32 5 5	27.2239=	27 1 13	
	52.2491=	52 1 16	54.9139=	54 6 8	65.6422=	65 4 10	57.0563=	57 0 7	
MANCHESTER UNITY, 1860.									
Age.	Rural.		Town.		City.		Rural, Town, and City.		
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	
20 to 30	8.4835=	8 3 9	8.2843=	8 2 0	8.0236=	8 0 4	8.0239=	8 0 4	
30 „ 40	9.6292=	9 4 10	9.4190=	9 2 22	9.2915=	9 2 1	9.4820=	9 3 9	
40 „ 50	12.7326=	12 5 3	14.2678=	14 1 21	13.4209=	13 2 23	14.0451=	14 0 7	
50 „ 60	22.8377=	22 5 21	25.7285=	25 5 2	28.4000=	28 2 19	26.1347=	26 0 23	
	53.6830=	53 4 19	57.6996=	57 4 21	59.1360=	59 0 23	57.6857=	57 4 19	

From this statement it appears that the aggregate sickness, although shewing at some ages a great difference in the average amount, yet for the whole period, from 20 to 60, this difference, in the rural districts, does not amount to a single day. In the town districts, the Manchester Unity, from the experience of 1856-60, shows an excess of sickness of little

more than two weeks for the same period; but the experience of the Unity for the years 1846-8, shows a less sickness of $3.0585 = 3$ weeks, 9 hours, less than that of Mr. Finlaison.

In the city districts, the aggregate sickness from age 20 to 30 is highest, from the experience of Mr. Finlaison, the excess being over that of the Unity, in 1846-8, $2.1320 = 2$ weeks, 22 hours, and over that of 1856-60, $.9604 = 6$ days, 16 hours. For the next ten years, from 30 to 40, the excess by Mr. Finlaison is only $.1048 = 17$ hours, over that of the Unity for 1846-8, and $.4563 = 3$ days, 4 hours, more than that of 1856. From age 40 to 50, the highest aggregate is experienced, in the Manchester Unity, in the years 1846-8, being $2.9537 = 2$ weeks, 6 days, 16 hours, more than that of Mr. Finlaison, and $3.0114 = 3$ weeks, 2 hours, in excess of that of 1856-60. The experience of the Manchester Unity, 1856-60, shows the aggregate sickness to be greater in the period 50 to 60, than the experience by Mr. Finlaison, the excess being $7.4569 = 7$ weeks, 3 days, 4 hours, and being $6.5124 = 6$ weeks, 3 days, 14 hours, less sickness than appeared in 1846-8. The aggregate sickness for the period 20 to 60 being $65.6422 = 65$ weeks, 4 days, 10 hours, in the Manchester Unity of 1846-8, $59.1360 = 59$ weeks, 23 hours, in the Unity, 1856-60, and $51.6791 = 51$ weeks, 4 days, 18 hours, in that by Mr. Finlaison, shows an excess over that of Mr. Finlaison of $7.4569 = 7$ weeks, 3 days, 4 hours, for the years 1856-60, and $13.9631 = 13$ weeks, 6 days, 18 hours, over that of the Unity, 1846-8.

Taking the sickness combined in the three districts of Mr. Finlaison, in those of the Unity for 1846-8 and 1856-60, from age 20 to 30, the highest aggregate sickness is experienced in Friendly Societies (England and Wales), by Mr. Finlaison, and the least in the Unity for 1846-8. The experience of the Unity, 1856-60, gives $.9775 = 6$ days, 20 hours, more than appeared in the Unity, 1846-8, and $1.8082 = 1$ week, 5 days, 15 hours, less than shown from the data of Mr. Finlaison. In passing from age 30 to 40, the aggregate appears $.4392 = 3$ days, 1 hour, more than in 1846-8, and $.8495 = 5$ days, 22 hours, less than the experience of Mr. Finlaison. In the next period, from age 40 to 50, the Manchester Unity of 1856-60, shows an excess over Mr. Finlaison of $.6830 = 4$ days, 18 hours, and $.3019 = 2$ days, 2 hours, over that of 1846-8. In the next period, from 50 to 60, the aggregate sickness in the Unity for 1846-8, and 1856-60, appears within one day of each other, and that of 1856-60, shows an excess of $6.1567 = 6$ weeks, 1 day, 2 hours, over that of Mr. Finlaison. If taken from ages 20 to 60, the aggregate sickness is nearly equal, the greatest difference being between the lives of Mr. Finlaison and those of the Unity, 1856-60, a difference of $3.5546 = 3$ weeks, 3 days, 21 hours, in passing through 40 years of life.

If it be taken into consideration that miners and colliers, forming 7.2 per cent. of all the lives, are included in both instances in the results of the Unity, but excluded from the experience of Mr. Finlaison, the aggregate sickness approximates very closely. It is hereafter shown that when miners and colliers are excluded from the experience of 1856-60, the aggregate sickness is $55.2634 = 55$ weeks, 1 day, 20 hours, giving an excess of $1.7197 = 1$ week, 5 days, sickness in the experience of the Manchester Unity, 1856-60, over the experience of Friendly Societies by Mr. Finlaison.

DURATION OF LIFE AND AVERAGE AMOUNT OF SICKNESS IN VARIOUS TRADES.

The bulk of Friendly Societies are composed of persons following many and various occupations and trades. In some cases, persons following one trade or occupation—miners more especially—with a very slight addition of other trades, form a Friendly Society. For the information of the members of these Societies, so as to enable them to understand why a higher rate of contribution is required in some cases than in others, the following analysis of trades has been made.

From what has been previously stated, it must be expected, for it follows throughout the investigation, that where the experience is small, the fluctuation in sickness and mortality is great. Still the results obtained from the experience of the various trades give a general idea of what may be expected when operated upon by similar circumstances.

It must be distinctly understood, that, in any comparison made of any particular trade with that of the whole Unity, that each and every trade is included in the latter. To form a fair comparison, each trade, as examined, should be abstracted from the whole or combination; but it has been considered that a sufficient approximation has been arrived at, by allowing the trade or occupation under examination, with the exception of miners, to remain therein.

So far as mortality is concerned, it is very evident the bulk of the lives classified are of greater value than those left after extraction of the trades, for if reference be made to Table XV., it will be seen, that the aggregate mortality for the whole of the periods named, shows the same to be 7.6228, being .0512 less than the aggregate rate of the non-selected lives.

In the classification of the trades hereafter given, the aggregate mortality for the five periods of life, ages 20, 30, 40, 50, and 60, will be found to be greater in fifteen, and less in eleven trades; and the aggregate average sickness, in passing from 18 to 70 years of age, is greater in sixteen, and less in ten trades, than the aggregate sickness for the general class of lives for the same period. When the whole of the trades separately given are united in one class, the aggregate rate of mortality is less in the combined classification, than appears in the general bulk, with these trades included.

On reference to Table XVI., it will be seen that at each of the periods given, the average sickness is greater in the trades combined, than the average sickness of the rural, town, and city districts, these trades being included. The following difference appears at the periods given:—

At age 20, increased Sickness in Trades combined,	.0151
" 30,	" .0533
" 40,	" .0803
" 50,	" .1635
" 60,	" .2529

If the aggregate sickness in passing from period to period be noticed, it will show more clearly the sickness experienced in the trades combined, when separate and distinct from the general class of rural, town, or city districts.

Excess of aggregate sickness from age 20 to 30, in trades combined, .3409

"	30	" 40,	"	.5455
"	40	" 50,	"	1.1324
"	50	" 60,	"	2.2304
"	60	" 70,	"	1.7725
"	20	" 70,	"	6.0217

The following table gives the rate of mortality for the Unity, rural, town, and city districts, for the different trades, and for the whole of the trades combined in one class.

TABLE XV.

AVERAGE RATE OF MORTALITY, DECENNIAL PERIODS, MANCHESTER UNITY, RURAL, TOWN, AND CITY, AND VARIOUS TRADES, AND THE TRADES COMBINED.

	AGE.				
	20	30	40	50	60
Manchester Unity ... ..	.8434	.7907	1.1011	1.6707	3.2681
Bakers	1.4487	.7481	.8021	1.4448	3.5223
Blacksmiths ... ..	.6470	.7933	.9261	1.6302	3.2978
Bricklayers ... ..	.6564	.5653	.8700	1.5806	3.0182
Butchers ... ..	.8717	.8919	1.4389	1.9563	2.9747
Carpenters ... ..	.6265	.7184	.8540	1.4897	2.5852
Clerks ... ..	.5141	1.1204	1.2559	1.9953	3.3909
Coopers ... ..	.4400	1.1337	1.9085	2.7551	3.7662
Dyers	1.2876	.6295	2.9803	2.3219	2.1748
Labourers, Town and City	.7412	.7211	1.0951	1.5850	2.8255
Ditto, Rural ... ..	.6605	.5865	.7569	1.0083	2.5657
Mill Operatives ... ..	.4605	.6865	1.0652	2.1502	4.4840
Miners ... ..	.8955	1.1415	1.2514	2.0816	3.5827
Plumbers ... ..	.6848	.7040	1.3913	3.0202	4.1630
Potters ... ..	.4144	.7170	1.8629	2.3840	5.4241
Printers ... ..	.4470	.4622	1.1343	1.3904	6.0820
Sawyers ... ..	.4250	.4427	.6856	1.4878	3.1552
Servants... ..	.4130	.6699	1.3122	1.5818	4.1793
Shoemakers ... ..	.6970	.7264	.9370	1.2422	3.1347
Spinners... ..	.5093	.8404	1.0085	1.7504	3.0114
Stonemasons ... ..	.9139	.6383	1.8556	3.4536	5.7522
Tailors ... ..	.9092	.9539	.9526	1.6330	3.9803
Watermen	1.5941	1.6882	1.5598	1.7395	3.0157
Weavers... ..	1.1120	.5860	1.1787	1.6545	2.6874
Wheelwrights ... ..	.8430	.7031	.9664	1.3911	3.5146
Woolcombers... ..	.4643	.8213	4.2469	1.2398	3.8866
Trades combined ... ..	.7938	.8005	1.0859	1.6876	4.2774

In order to see at one glance the average rate of sickness for decennial periods and amongst the various trades, also to compare the sickness with the average sickness experienced when those trades are combined, and with that of the three districts in combination, the following table has been computed. The two following tables have been given to enable the members at one view to see the aggregate sickness experienced in passing from period to period, as well as from the commencement of the experience of each member to other periods given in the table.

TABLE XVI.
AVERAGE RATE OF SICKNESS EXPERIENCED AT THE RESPECTIVE AGES.

	Age 20.		Age 30.		Age 40.		Age 50.		Age 60.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
Manchester Unity ...	.8260=	0 5 19	.8367=	0 5 21	1.1478=	1 1 1	1.8461=	1 5 22	4.0245=	4 0 4
Bakers ...	.7361=	0 5 4	.8354=	0 5 20	.8528=	0 5 23	1.8899=	1 6 5	6.0873=	6 0 15
Blacksmiths ...	1.0501=	1 0 8	.9755=	0 6 20	1.1246=	1 0 21	1.7388=	1 5 12	4.4939=	4 3 11
Bricklayers ...	.6709=	0 4 17	.7925=	0 5 13	1.3163=	1 2 5	1.9704=	1 6 9	3.8317=	3 5 20
Carpenters ...	.6530=	0 4 13	.5456=	0 3 20	.7340=	0 5 3	1.5165=	1 3 15	3.9250=	3 6 11
Butchers ...	.8593=	0 6 0	.8280=	0 5 19	1.1127=	1 0 19	1.7758=	1 5 10	4.5937=	4 4 4
Clerks ...	.4239=	0 2 23	.5190=	0 3 15	.7417=	0 5 4	1.3260=	1 2 7	5.0860=	5 0 14
Coopers ...	.5692=	0 4 0	.7571=	0 5 7	1.4203=	1 2 23	1.9223=	1 6 11	3.1762=	3 1 6
Dyers ...	.8788=	0 6 3	.7077=	0 4 23	.9146=	0 6 10	1.4719=	1 3 7	2.9346=	2 6 13
Labourers, Town and City	.9029=	0 6 8	.9267=	0 6 12	1.3344=	1 2 8	2.0991=	2 0 17	4.1101=	4 0 19
Ditto, Rural ...	.8344=	0 5 20	.8664=	0 6 2	1.2014=	1 1 10	1.9890=	1 6 22	3.4322=	3 3 1
Mill Operatives ...	.7310=	0 5 3	.6472=	0 4 13	.9937=	0 6 23	1.9234=	1 6 11	3.5017=	3 3 12
Miners ...	1.0764=	1 0 13	1.3402=	1 2 9	2.0602=	2 0 10	3.2538=	3 1 19	6.7293=	6 5 2
Plumbers ...	.6740=	0 4 17	.8402=	0 5 21	1.4523=	1 3 4	1.9270=	1 6 12	3.7350=	3 5 3
Potters ...	.7740=	0 5 10	.6879=	0 4 20	1.4997=	1 3 12	.7890=	0 5 13	5.6176=	5 4 8
Printers ...	.9477=	0 6 15	.6483=	0 4 13	1.1544=	1 1 2	1.4709=	1 3 7	4.9511=	4 6 16
Sawyers ...	.6775=	0 4 18	.8610=	0 6 1	1.5164=	1 3 15	2.2479=	2 1 18	6.8508=	6 5 23
Servants ...	.8310=	0 3 17	.8415=	0 5 21	1.1287=	1 0 22	2.0568=	2 0 9	3.6370=	3 4 11
Shoemakers ...	.7824=	0 5 12	.8152=	0 5 17	1.0203=	1 0 4	1.6453=	1 4 12	3.6017=	3 4 5
Spinners ...	.7149=	0 5 0	.7816=	0 5 11	1.0718=	1 0 12	1.9673=	1 6 18	4.4711=	4 3 7
Stonemasons ...	.5982=	0 4 5	.8845=	0 6 5	1.5385=	1 3 19	3.3743=	3 2 15	5.2372=	5 1 16
Tailors ...	.8428=	0 5 22	.8959=	0 6 7	1.0791=	1 0 13	1.5977=	1 4 4	4.0954=	4 0 12
Weavers ...	.6938=	0 4 20	.8066=	0 5 15	1.1204=	1 0 20	1.8779=	1 6 3	3.7863=	3 5 12
Wheelwrights ...	.9768=	0 6 20	.8018=	0 5 15	.8733=	0 6 3	1.2942=	1 2 1	2.7811=	2 5 11
Woolcombers ...	.8041=	0 5 15	.7634=	0 5 8	1.0849=	1 0 14	2.0980=	2 0 16	4.4916=	4 3 10
Watermen ...	.9130=	0 6 9	1.0027=	1 0 0	1.3298=	1 2 7	1.7080=	1 4 23	3.4722=	3 3 7
Trades Combined ...	.8411=	0 5 21	.8900=	0 6 6	1.2281=	1 1 14	2.0096=	2 0 2	4.2774=	4 1 23

TABLE XVII.
COMPARATIVE VIEW OF SICKNESS IN VARIOUS PERIODS OF YEARS.

	Age 20 to 30.		Age 30 to 40.		Age 40 to 50.		Age 50 to 60.		Age 60 to 70.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
Manchester Unity	8.0239=	8 0 4	9.4820=	9 3 9	14.0451=	14 0 8	26.1347=	26 0 23	61.4624=	61 3 6
Bakers	8.3583=	8 2 13	7.7429=	7 5 6	12.0489=	12 0 7	32.6234=	32 4 8	89.2605=	89 1 18
Blacksmiths	9.9814=	9 6 20	10.1055=	10 0 19	13.0617=	13 0 11	30.2894=	30 2 0	68.6749=	68 0 14
Bricklayers	7.0897=	7 0 15	9.6788=	9 4 18	16.3622=	16 2 11	25.3913=	25 2 17	38.9304=	38 6 12
Butchers	5.7020=	5 4 20	6.0205=	6 0 4	11.1968=	11 1 10	20.5155=	20 3 4	41.1289=	41 0 21
Carpenters	8.3119=	8 1 17	9.5607=	9 3 23	13.5096=	13 3 15	45.5880=	45 4 1	66.9041=	66 6 7
Clerks	4.9317=	4 6 12	4.9438=	4 6 15	10.8475=	10 5 20	20.0184=	20 0 13	71.8476=	71 5 22
Coopers	6.6635=	6 4 15	9.8197=	9 5 17	16.4976=	16 3 12	20.5126=	20 3 14	37.1918=	37 1 8
Dyers	7.8966=	7 6 6	7.5784=	7 4 0	11.9705=	11 6 20	19.1651=	19 1 6	40.7520=	40 4 10
Labourers, Town and City	9.0866=	9 0 15	10.4646=	10 3 5	16.2840=	16 2 4	29.3529=	29 2 11	65.7415=	65 5 5
Ditto, Rural	8.4963=	8 3 12	10.0644=	10 0 23	14.2832=	14 1 23	26.2383=	26 1 17	52.6374=	52 4 11
Mill Operatives	6.8521=	6 6 1	7.7579=	7 5 8	12.9218=	12 6 11	25.7782=	25 5 11	54.5215=	54 3 14
Miners	11.8286=	11 5 19	15.7695=	15 5 8	25.7221=	25 4 22	45.0573=	45 0 10	85.3995=	85 2 18
Plumbers	7.5806=	7 4 1	10.1447=	10 1 0	17.4945=	17 3 11	26.2958=	26 2 2	134.6026=	134 4 2
Potters	6.2212=	6 1 14	9.5774=	9 4 1	16.6859=	16 4 8	28.7369=	28 5 3	94.8285=	94 5 19
Printers	7.8725=	7 6 3	8.2070=	8 1 11	13.0045=	13 0 0	25.8960=	25 6 5	56.1306=	56 0 22
Sawyers	7.7805=	7 5 11	11.8763=	11 1 5	16.4399=	16 3 4	40.8222=	40 5 18	127.8496=	127 5 23
Servants	6.9598=	6 6 17	9.5558=	9 3 21	13.7594=	13 5 7	28.5183=	28 3 15	45.5826=	45 4 1
Shoemakers	8.2707=	8 1 22	8.6353=	8 4 12	12.8364=	12 5 22	23.5354=	23 3 18	47.0762=	47 0 13
Spinners	7.3443=	7 2 8	8.9964=	8 6 22	13.5869=	13 4 3	28.5789=	28 4 1	56.9785=	56 6 21
Stonemasons	7.7594=	7 5 6	10.4433=	10 3 3	21.5245=	21 3 17	41.6514=	41 1 14	26.8802=	26 6 3
Tailors	8.6219=	8 4 9	9.4428=	9 3 8	12.2636=	12 1 19	71.7895=	71 5 12	51.6575=	51 4 16
Watermen	8.6613=	8 4 13	11.8138=	11 5 17	15.3980=	15 2 18	18.1761=	18 1 5	67.1443=	67 1 1
Weavers	7.7264=	7 5 3	9.2453=	9 1 13	13.8775=	13 6 3	26.7147=	26 5 1	56.3734=	56 2 14
Wheelwrights	8.7111=	8 5 1	7.7451=	7 5 6	11.2115=	11 1 13	20.5468=	20 3 17	32.9256=	32 6 13
Woolcombers	7.2822=	7 1 23	9.8040=	9 5 14	14.0868=	14 0 14	28.1311=	28 0 22	51.0818=	51 0 12
Trades combined	8.5648=	8 3 23	10.0275=	10 0 5	15.1775=	15 1 6	28.3651=	28 2 13	63.2349=	63 1 15

TABLE XVIII.
AGGREGATE AMOUNT OF SICKNESS IN VARIOUS PERIODS OF YEARS.

	Age 18 to 30.		Age 18 to 40.		Age 18 to 50.		Age 18 to 60.		Age 18 to 70.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
Manchester Unity	9.6767=	9 4 17	19.1587=	19 1 2	38.0088=	38 0 0	59.3385=	59 2 9	120.8009=	120 5 14
Bakers	9.7740=	9 5 10	17.5169=	17 3 15	29.5658=	29 3 23	62.1892=	62 1 8	151.4497=	151 3 3
Blacksmiths	12.1179=	12 0 20	22.2934=	22 1 14	35.2851=	35 2 0	65.5745=	65 4 1	133.6494=	133 4 13
Bricklayers	8.4315=	8 3 1	18.1103=	18 0 19	34.4725=	34 3 7	59.8638=	59 6 1	98.7942=	98 5 13
Butchers	7.0506=	7 0 9	13.0711=	13 0 12	24.2679=	24 1 21	44.7834=	44 5 12	85.9123=	85 6 9
Carpenters	10.0242=	10 0 4	19.5849=	19 4 2	33.0945=	33 0 16	58.6825=	58 4 19	125.5886=	125 4 3
Clerks	5.7744=	5 5 10	10.7182=	10 5 1	21.5657=	21 3 23	41.5841=	41 4 2	113.4317=	113 3 1
Coopers	7.7729=	7 5 10	17.5926=	17 4 2	34.0902=	34 0 15	54.6028=	54 4 5	91.7946=	91 5 13
Dyers	9.6701=	9 4 17	17.2485=	17 1 18	29.2190=	29 1 13	48.3841=	48 2 16	89.1361=	89 0 23
Labourers, Town and City	10.8930=	10 6 6	21.3576=	21 2 12	37.6416=	37 4 12	66.9945=	66 6 23	132.7360=	132 5 4
Ditto, Rural	10.1561=	10 1 2	20.2205=	20 1 13	34.5017=	34 3 12	60.7400=	60 5 4	113.3774=	113 2 15
Mill Operatives	8.3247=	8 2 7	16.0826=	16 0 14	29.0044=	29 0 1	54.7826=	54 5 11	109.3041=	109 2 3
Miners	13.9504=	13 6 16	29.7127=	29 5 0	55.4348=	55 3 1	100.4921=	100 3 11	185.8916=	185 6 6
Plumbers	8.9019=	8 6 7	19.0466=	19 0 8	36.5411=	36 3 19	62.8869=	62 5 21	134.6028=	134 4 5
Potters	7.9299=	7 6 12	17.5078=	17 3 13	34.1932=	34 1 8	62.9301=	62 5 12	157.7586=	157 5 7
Printers	9.7947=	9 5 14	18.0017=	18 0 0	31.0062=	31 0 1	56.9022=	56 6 8	118.0328=	118 0 14
Sawyers	9.0477=	9 0 8	20.9240=	20 6 11	37.3839=	37 2 17	78.2061=	78 1 10	206.0557=	206 0 9
Servants	8.0739=	8 0 12	17.6297=	17 4 10	31.3891=	31 2 17	59.9074=	59 6 8	105.4900=	105 3 10
Shoemakers	9.7985=	9 5 14	18.4338=	18 3 1	31.2702=	31 1 21	54.8036=	54 5 15	101.8818=	101 6 4
Spinners	8.7715=	8 5 11	17.7679=	17 5 9	31.3548=	31 2 12	59.9335=	59 5 13	116.9122=	116 6 9
Stonemasons	8.8871=	8 6 5	19.3854=	19 2 8	40.8599=	40 6 0	82.5113=	82 3 14	154.3008=	154 2 3
Tailors	10.3142=	10 2 5	19.7570=	19 5 7	32.0206=	32 0 4	58.9008=	58 6 7	110.5584=	110 3 22
Watermen	10.5456=	10 3 20	22.3634=	22 2 12	37.7574=	37 5 7	55.9835=	55 6 13	123.0778=	123 0 13
Weavers	9.0584=	9 0 10	18.3037=	18 2 3	32.1812=	32 1 6	58.8939=	58 6 7	115.2693=	115 1 21
Wheelwrights	10.7523=	10 5 6	18.4974=	18 3 12	29.7089=	29 4 23	50.2549=	50 1 19	83.1805=	83 1 6
Woolcombers	8.9183=	8 6 10	18.7223=	18 5 1	32.8091=	32 5 16	60.9402=	60 6 14	112.0220=	112 0 4
Trades Combined	10.2433=	10 1 17	20.0708=	20 0 12	35.2483=	35 1 17	63.6134=	63 4 7	126.8483=	126 5 22

B A K E R S .

Bakers show a higher, at the decennial periods of life, 20 and 60, and at the other decennial periods, 30, 40, and 50, they exhibit a lesser rate of mortality. On the aggregate of the five periods, they show a higher rate, and when the mortality is compared with that of the experience of bakers in the Manchester Unity for 1846-8, the rate of mortality is greater at the decennial periods of 20, 30, and very slightly at 50. The aggregate mortality for the five periods for the years 1846-8 is as 7.6920 to 7.9660.

Mr. Neison, in his Vital Statistics, gives the rate of mortality from the experience he obtained of this class of lives from Friendly Societies' returns. The rate for the decennial periods, together with that of the Unity for 1846-8 and 1856-60, is as follows:—

Age.	Manchester Unity, 1860.	Neison.	Manchester Unity, 1846.
20	1.4487	.7247	.5622
30	.7481	.4960	.5971
40	.8021	.7147	1.4229
50	1.4448	1.9490	1.8462
60	3.5223	5.3509	3.7636
	7.9660	9.2353	7.6920

It will be seen that the aggregate of the rate of mortality from the experience obtained by Mr. Neison, is considerably greater than that of either of those of the Unity, the increase being most apparent at age 60.

The average rate of sickness, as shown to exist in this class of lives, is less than in the general class at the periods 20, 30, and 40; but the average sickness after age 50 increases to such an extent as to give an aggregate of average sickness, from age 20 to 60, amounting to $60.7735 = 60$ weeks, 5 days, 10 hours. The aggregate average sickness for the same period for the general class of lives being $57.6857 = 57$ weeks, 4 days, 19 hours, shows an excess, from the experience of the Manchester Unity for 1860, of $3.0878 = 3$ weeks, 0 days, and 15 hours; and the aggregate sickness of bakers from the experience of the Unity for 1846-8, amounting to $54.6708 = 54$ weeks, 4 days, and 17 hours, shows a higher rate has been experienced in the years 1856-60.

B L A C K S M I T H S , F A R R I E R S .

Blacksmiths, compared with the general class of lives, show a higher rate of mortality at the decennial periods 30 and 60, but only to a very small extent. At the other periods, 20, 40, and 50, the rate of mortality is less, and on the aggregate of the five periods, the rate is .3796 per cent. less than the three districts of the Unity combined. When compared with the experience of 1846-8, blacksmiths show a less rate of mortality at all the periods, age 20 excepted. The difference of the aggregate of the five periods being 2.6603 per cent. in favour of the present experience.

The average rate of sickness is considerably greater at the first decennial period of life, age 20, something higher at ages 30 and 60, than appears in the general class of lives, and

owing to the average rate of sickness at these periods being higher, and the other period exhibiting very little variation, the aggregate rate of sickness for the period 20 to 60, amounts to $63.4380 = 63$ weeks, 3 days, and 2 hours, being $5.7523 = 5$ weeks, 5 days, 11 hours more than the aggregate of the general class of lives. As compared with the aggregate sickness experienced in the years 1846-8, this class of lives shows an increase for that period of $8.7486 = 8$ weeks, 5 days, and 5 hours, the average sickness in the data of 1846-8 being less at each decennial period.

BRICKLAYERS.

This class of lives shows a less rate of mortality at each of the decennial periods, 20, 30, 40, 50, and 60, the greatest difference being at age 60, and the least at age 50; and taking the rate of mortality for the five periods as compared with the general class of lives, there appears a difference of 12.8 per cent. in favour of bricklayers, in comparison with the aggregate rate for the classes combined.

The mortality in this class, as compared with the same trade, from the experience of 1846-8, shows a higher rate at the period of life, age 20; but the slight decrease at the periods 30, 40, and 50, and the very great decrease at the period 60, reduces the rate nearly 50 per cent. below the experience of 1846-8, the aggregate being, on the 5 years, 12.7672, against 6.6905, the experience of the Unity in 1860.

The average rate of sickness experienced at the decennial periods of 20, 30, and 60, is less than the average rate experienced at those periods for the general class of lives; but at the periods of life, ages 40 and 50, the small increased average rate is such as to give an aggregate sickness to this class of lives, for the periods previously named, of $.8363 = 5$ days, 21 hours. In 1846-8, the average rate of sickness experience by this class of lives, is less at the periods 20, 40, and 50, and at age 30, is nearly equal; but at age 60, the increased average rate of sickness becomes so great, as to cause the aggregate sickness for these periods to be within a fraction of each other, neither varying one day from the general class of lives. It should be observed, that not only is there an increased rate of average sickness at the age 60, but also, as stated in the previous paragraph, a very high rate of mortality also appeared.

BUTCHERS.

Butchers experience a higher rate of mortality than the general class of lives at each of the decennial periods, 20, 30, 40, and 50, the greatest difference, .3378 per cent., being at age 40. At age 60, there appears a lower rate of mortality; but when the aggregate of the five periods is taken, the rate of mortality appears to be .59 per cent. higher than in the general class.

In the years 1846-8, the average rate of mortality, as compared with the general class of lives for 1860, gives a higher rate at the decennial periods 40 and 50, and less rate at the other periods; but when compared with this select class of lives, from the experience of 1846-8, the rate of mortality is higher at the periods 20, 30, 40, and 60, but less at the period 50; and in the aggregate for the five periods the rate appears to be 6.3 per cent. higher than in the districts combined.

Butchers experience a very low average rate of sickness, considerably less than the

general class of lives at each decennial period given; the greatest difference being $.4138 = 2$ day, 21 hours, per annum at age 40, and the least difference being $.0995 = 17$ hours at age 60.

The aggregate average sickness shows a difference of $14.2509 = 14$ weeks, 1 day, 18 hours, between the experience by the general class of lives, ($57.6857 = 57$ weeks, 4 days, 19 hours,) and the aggregate of this selected class for the same period, 20 to 60, ($43.4348 = 43$ weeks, 3 days, 1 hour).

It is very evident, from the present experience confirming the very favourable report made in 1846-8 on this class of lives, that the result is general, and not for one period only. Next to clerks, butchers experience less sickness than any of the selected trades given.

CARPENTERS AND JOINERS.

The average rate of mortality, from the experience of the Manchester Unity in this class, appears less at every decennial period than in all the trades combined.

The same was the case in 1846-8. In the years 1846-8, the aggregate rate for the five periods was 5.9643, in 1860 it was 6.2738. As compared with the general class of trades for the same years, cabinet makers and joiners show 18.2 per cent. less aggregate mortality for the five periods than the three districts combined.

The average rate of sickness is a little higher than in the general class of lives at the decennial periods of life, 20 and 30. At the other periods, 40, 50, and 60, the average sickness is less than in the general class; but the total variation is little, the aggregate sickness amongst cabinet makers and joiners, being $56.9702 = 56$ weeks, 6 days, and 19 hours, a difference only of $.7155 = 5$ days from that of the combined class in passing through 40 years of life.

From the experience of this class of lives, 1846-8, the aggregate then given was only $46.2092 = 46$ weeks, 1 day, and 11 hours, the average rate at each decennial period, age 30 excepted, showing less average sickness than appears in the experience of 1860.

Labourers (town, city, and rural) and carpenters, joiners, and miners, furnish the largest number of persons in any of the selected trades; and it may be observed with what regularity the average rate of mortality and sickness increases amongst them. Amongst labourers (town and city) at one period only, age 30, a less rate of mortality is shown than at age 20. This rule also is observable in the general class of lives, which, of course, includes the whole of the experience.

The following shows the average increase of sickness, from period to period, for the following ages:—

At age 20, experience of 1860,	8.593	experience of 1846,	.5657
" 30, " "	8.480	" "	.8498
" 40, " "	1.1127	" "	.9667
" 50, " "	1.7758	" "	1.2473
" 60, " "	4.5917	" "	3.8333

CLERKS AND SCHOOLMASTERS.

In this class of lives there appears a higher rate of mortality at the decennial periods of life, 30, 40, 50, and 60, than appears in the general class of lives. At the period 20, the mortality appears less than in the general experience, arising no doubt from a less

number of lives being observed upon at this early age. From the Vital Statistics of Mr. Neison, this class of lives appears to be subject to a higher rate of mortality, as will be observed from the following table:—

Age.	Manchester Unity, 1860.	Manchester Unity, 1846-8.	Mr. Neison.
20	.5141	.8421	1.0946
30	1.1204	1.0946	2.1868
40	1.2559	1.1836	1.8847
50	1.9953	4.6678	2.5186
60	3.3909	5.1256	6.4416
	8.2766	12.9137	14.1263

The aggregate for the five periods is greatest from the experience by Mr. Neison, and the next from the experience of the Unity, for the years 1846-8. The latter experience being derived from a small number of lives, does not appear so regular, but a very rapid increase is shown at the age 50. From the great increase in the rate of mortality, at the latter age, the aggregate for the five years of 1846-8 is in excess of that of 1860.

The average rate of sickness experienced by clerks and schoolmasters, is less at the four first decennial periods of life, but greater at age 60, than the average sickness experienced by the general class of rural, town, and city districts combined. From this low rate, the aggregate sickness, in passing from 20 to 60, is only $40.7414 = 40$ weeks, 5 days, 4 hours, being the lowest amount experienced by any of these selected trades. The same results appeared in 1846-8, but at that time the aggregate sickness only amounted to $35.6835 = 35$ weeks, 4 days, and 19 hours, being, also, the lowest amount appearing at that time.

The rate of average sickness in each experience shows a regular increase up to age 52. From that period to age 64, a small decrease takes place in the data of 1846-8; but from the experience of 1860, from age 52 a rapid increase is observed. The average sickness at age 60 is 25 per cent. higher than in the general class of lives.

COOPERS.

From the experience of the Unity in 1846, as well as in 1860, this class of lives shows a high rate of mortality. At the first decennial period, age 20, the rate of mortality is less in both experiences than in the general class of lives, but at all the other periods the mortality is greatest. In 1846, the aggregate rate for the five periods of 20, 30, 40, 50, and 60, is 25 per cent. greater, and the experience of the years 1856-60 shows a still greater aggregate, being 30 per cent. in excess of the general class.

Although the average rate of mortality appears very high in the trade above named, the average sickness, from the experience of the year 1860, is very favourable as compared with that of the whole trades combined. It shows a higher average rate of sickness occasionally, but this only at the periods 40 and 50, but the lesser rate at the periods 20, 30, and 60, causes a less aggregate sickness of $4.1923 = 4$ weeks, 1 day, 8 hours, in passing through the period of 40 years, from 20 to 60.

D Y E R S .

The rate of mortality experienced by this class of lives is very high at the early period in the table, and decreases up to the age 28. From that age to age 43, there is an increase in the rate at every age, then another decrease sets in, which continues up to age 54, when again an increase is apparent to the end of the table.

There is no doubt this irregularity arises, in a great measure, from the small number of lives whose experience has been collected. Other circumstances, as locality, may also affect the results, for in 1846-8, and with much less experience, the progressive rate of mortality was more regular, increasing from one decennial period to another. But notwithstanding all this irregularity referred to, the aggregate mortality for the five periods is equal to that of 1846-8, or nearly so, a very slight difference only appearing.

Dyers, as with coopers, showing a higher rate of mortality, experience less average sickness than the general class. At the decennial period, age 20, certainly a higher rate of sickness appears in comparison to the general class, but only to a slight extent. The less average sickness, experienced at the ages 30, 40, 50, and 60, gives the aggregate sickness experienced in passing from 20 to 60 years of age, at $46.6106 = 46$ weeks, 4 days, and 7 hours. The aggregate for the general class is $57.6857 = 57$ weeks, 4 days, and 19 hours, which shows a less aggregate sickness of $11.0754 = 11$ weeks, and 13 hours, to dyers, from the experience of 1860, than amongst the general class of lives.

L A B O U R E R S . — T O W N A N D C I T Y .

This class of lives forms a considerable part of the experience of the town and city districts, being the largest amount in the selected lives. The rate of mortality follows the same rule as the rural, town, and city districts combined, decreasing from the earliest age in the table to 31. From that age an increase in the rate of mortality takes place every year. The rate of mortality is less at every decennial period of life, in the proportion, on the whole five periods, of an aggregate rate on the general class of 7.6740 to 6.9679 in this selected class.

In comparing this class of lives with the experience of 1846-8, the rate of mortality is more favourable in the earlier data, at age 40; but at the remaining periods, 20, 30, 50, and 60, the average rate of mortality is in favour of the later data. The aggregate rate for the five periods is 6.9679 for 1860, and 8.4527 for the experience of 1846-8.

This is a class of lives exposed to the weather, and may be compared with the sickness experienced from the returns made by Friendly Societies, and from which tables have been constructed by Mr. Finlaison. At the same time, in making the comparison, it must be understood, that from each experience, colliers, mariners, and miners are excluded. The following, in a tabular form, shows the average rate of mortality from both experiences, and from that of the Unity in 1846-8.

Age.	Manchester Unity, 1846.	Mr. Finlaison.	Manchester Unity, 1860.
20	.8406	.72	.7412
30	.8154	.72	.7211
40	1.0034	.92	1.0951
50	1.8370	1.35	1.5850
60	3.9563	2.32	2.8255
	8.4527	6.08	6.9679

At age 20, the highest rate of mortality appears in the experience of the Unity for 1846-8. The same remark holds good for the periods 30, 50, and 60; and in the period, age 40, the highest rate appears in the experience of the Unity, 1860. In the data of Mr. Finlaison, taking the five decennial periods, 20, 30, 40, 50, and 60, and comparing the "heavy labour and exposure to the weather" class with his general results of rural, town, and city combined, the rate of mortality at each of the periods is found to be highest in the combined lives. Taking the experience of the Unity for 1856-60 and comparing the same for these periods with the city and town labourers, the highest rate of mortality, as in Mr. Finlaison's experience, appears in the districts of the Unity combined. The difference per cent. on the aggregate of five decennial periods is, according to Mr. Finlaison's data, .62, and that of the Manchester Unity 1856-60, .70.

The average rate of sickness experienced by labourers of the town and city districts, appears to be nearly equal for the first ten years observed upon. From this time an increased rate of sickness will be found to the end of the table. Taking the decennial periods of 20, 30, 40, 50, and 60, an increased rate of average sickness is observed in the town and city districts, which give an aggregate of sickness of $65.1881 = 65$ weeks, 1 day, and 7 hours, in passing from 20 to 60 years, and show an excess of $7.5024 = 7$ weeks, 3 days, and 13 hours, of aggregate sickness for the period named, over the general class of lives.

In the years 1846-8, the average sickness at the early ages was less than that given by the experience of 1856-60. At the periods, 30, 40, 50, and 60, there was some variation, but not to any great extent, the difference in the aggregate being $3.5085 = 3$ weeks, 3 days, 13 hours, caused principally by the less average rate of sickness at the early ages.

In the following table is given the average experience from the general class of lives, and of those described "hard labour and exposure to the weather," of Mr. Finlaison, and the general class of lives, and of the town and city labourers of the Manchester Unity.

AVERAGE SICKNESS.

AGE.	Mr. Finlaison.		Mr. Finlaison.		Manchester Unity.		Manchester Unity.	
	With exposure to the weather.		All Classes.		Town and City Labourers.		All Classes.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
20	1.0235	= 1 0 5	.9833	= 0 6 21	.9029	= 0 6 8	.8260	= 0 5 9
30	1.0990	= 1 0 17	.9874	= 0 6 22	.9267	= 0 6 12	.8367	= 0 5 21
40	1.3428	= 1 2 10	1.1738	= 1 0 5	1.3344	= 1 2 8	1.1478	= 1 1 1
50	1.7969	= 1 5 13	1.6409	= 1 4 12	2.0991	= 2 0 17	1.8461	= 1 5 22
60	3.1109	= 3 0 19	2.6764	= 2 4 18	4.1101	= 4 0 19	4.0245	= 4 0 4

At every period in the table, when the data of Mr. Finlaison is examined, the excess of average sickness appears to be in the heavy labourer with exposure to the atmosphere, and the highest rate of average sickness in the Manchester Unity appears to be, with the exception of age 50, in the town and city labouring classes.

From the above there appears a near approximation of the difference existing between the two classes by Mr. Finlaison, and those of the Manchester Unity, as well in sickness as in the rate of mortality, keeping in view that colliers, miners, and mariners, are exempted from the combined classes of Mr. Finlaison.

LABOURERS.—RURAL.

This class includes all labourers in the rural districts, and they form a large portion of the general class of lives. The rate of mortality appears to decrease by the same rule as in the general class, from the first age to age 29; and from that time the average rate increases at every age. Without any exception, they appear the most favourable class in the selected trades, the mortality being considerably less than in the general class of lives at every given period. The aggregate rate of mortality in the general class for the periods 20, 30, 40, 50, and 60, being 7.6740, and the aggregate mortality for this class being 5.5779, shows a difference in their favour of 2.0961, equal to 27 per cent.

The experience of 1846-8 also corroborates the higher value of the lives of this class of members, the rate of mortality then only varying to the extent of .4038 in favour of the present experience on the aggregate average rate of the five decennial periods.

The experience of this class of lives is also given by Mr. Neison in his Vital Statistics. Their rate of mortality is inserted for comparison with that of the Unity for the years 1856-60 and 1846-8.

MORTALITY.

Age.	Manchester Unity, 1846-8.	Mr. Neison.	Manchester Unity, 1860.
20	.3394	.6102	.6605
30	.6516	.5578	.5865
40	.6769	.6828	.7569
50	1.2541	.9732	1.0083
60	3.0617	1.6501	2.5657
	5.9837	4.4741	5.5779

The general aggregate rate of mortality for the above periods appears to be highest from the experience of the Manchester Unity for 1846-8, and the least from the experience of Mr. Finlaison. At age 70, the rate of mortality by Mr. Neison amounted to 4.3975, and that of the Unity for 1856-60 to 3.1710 per cent. If the results of this period had been included, the aggregate rate of mortality for the six decennial periods of the Manchester Unity, 1860, and that of Mr. Neison, would have been equal.

The average rate of sickness increases at every age in the table, from first to last, it is greater at the decennial periods of life, 20, 30, 40, and 50, but less at age 60 than the general class of lives. This increased average sickness gives an aggregate of 59.0822 = 59 weeks, 14 hours, being 1.3965 = 1 week, 2 days, 18 hours, more than the aggregate sickness experienced in the general class of lives.

In comparison with the sickness experienced in the Manchester Unity in the years 1846-8, there appears at that period to be a higher rate of average sickness in this class of lives at ages 20, 40, and 50, equal to a difference of 3.5085 = 3 weeks, 3 days, 13 hours, in favour of the aggregate sickness experienced from age 20 to 60 in the years 1856-60.

MILL OPERATIVES.

This class of lives includes all kind of labour followed in cotton mills, the weaving portion and operative cotton spinners exempted. They experience a low rate of mortality at the early ages in the table, but an increased mortality is experienced at and after age 42 than is experienced in the general class of lives. Such increased rate continues, as to give, notwithstanding so low a rate at the early ages, an aggregate rate in excess of the general class for the whole periods 20, 30, 40, 50, and 60 placed together, of 1.1724, being equal to an aggregate rate of 15 per cent. over and above the general class of lives.

The same rule was observed in 1846-8 relative to this class of persons. In the early ages, a low rate of mortality was indicated, and an increased rate at the later ages, in comparison with the general class. This increase was so great, as to give an aggregate of 10.8963 in the five decennial periods before named.

They experience less average sickness than the general class of lives at ages 20, 30, 40, and 60; but at age 50, there appears a small increased rate of sickness. The aggregate sickness in passing from ages 20 to 60 is $53.3100 = 53$ weeks, 2 days, 4 hours, which shows the rate to be less by $4.4657 = 4$ weeks, 3 days, 6 hours, than the aggregate sickness of the general class of lives.

Although the average sickness experienced by mill operatives in 1846-8 appeared at the early ages to be less than experienced in the Unity in 1856-60, an accelerated rate of increase took place, which caused the aggregate sickness from each class to be within two days of each other in passing from ages 20 to 60.

MINERS AND COLLIERS.

Miners and colliers form 5.76 per cent. of the general class of lives, and if they were equally distributed over the whole, would not affect the general results to a very great extent, as may be seen on examination of Tables XXIII., XXIV., XXV., and XXVI., where the present values and annual premiums are given for the general class of lives, with miners and colliers included and excluded.

Taking the experience of miners and colliers alone, on reference to Table XIX., it will be seen that the rate of mortality is greater than the general class at every year of life, and that one-half of the lives die off between the ages 60-1, showing a less vitality of three years than the general class, themselves included; and when miners and colliers are excluded, a less vitality of four years.

From the experience of Mr. Neison, one-half of the lives of miners die off between the ages 61-2, and taking his experience of the general class of his lives, one-half die off between the ages 66-7, giving for his experience a superior vitality of five years on his general class, miners and colliers included.

In the experience of the Manchester Unity, 1846-8, one-half the lives of miners and colliers died off between the ages 60-1, showing an equal vitality to the present experience.

The following table shows the rate of mortality amongst miners, from the experience of the Unity, 1846-8, from the experience of Mr. Neison, from the experience of Mr. Finlaison, and from the present experience of the Manchester Unity, 1856-60.

RATE OF MORTALITY.

Age.	Mr. Nelson.	Manchester Unity, 1846-8.	Mr. Finlaison. Miners and Colliers.	Manchester Unity, 1860.
20	.7247	1.0306	.92	.8955
30	.4960	.8727	.91	1.1415
40	.7147	1.2026	.88	1.2514
50	1.9490	2.3564	1.81	2.0816
60	5.3509	3.8241	4.93	6.7293
	9.2353	9.2864	9.45	12.0993

From the above it will be seen that, taking the aggregate for the five decennial periods, the lowest rate of mortality is experienced by miners, from the data of Mr. Nelson, as is the case with his general class of lives. The highest aggregate mortality is experienced by the miners and colliers of the Manchester Unity, from the data of 1856-60, the difference being 2.8640 per cent.

It may, perhaps, enable some readers to see more clearly the different rates of mortality, if the specific intensity, or number out of which one person dies per annum, at the different ages, be given. For this purpose the following table has been prepared.

NUMBERS OUT OF WHICH ONE PERSON WOULD DIE AT THE FOLLOWING AGES—MINERS AND COLLIERS—FROM THE EXPERIENCE STATED.

Age.	Mr. Nelson.	Manchester Unity, 1846-8.	Mr. Finlaison.	Manchester Unity, 1860.
20	137.98	97.03	108.69	111.67
30	201.61	114.58	109.89	87.60
40	139.91	83.15	113.63	79.91
50	51.30	42.43	55.24	48.04
60	18.68	26.15	20.28	27.91
70	14.56	11.16	15.74	11.82

The specific intensity in the experience of the Manchester Unity, for the years 1856-60, increases from age 18 to 23, and from that period of life there is a decrease at every age to the end of the table. From the experience of the Unity in 1846-8, the specific intensity increased from age 18 to 31, and from that age a decrease took place at every year of life. It is seen that the specific intensity is less at the period of life, 20, than at age 30. From this data it appears that there is an early period of life, subject to a higher rate of mortality, than when a few after years have elapsed, amongst persons following this highly dangerous employment.

The average rate of sickness experienced by this class of lives, is far greater on comparison with the general class than is the rate of mortality. This rule does not apply in all trades. In some a high rate of mortality and a low average sickness is apparent; and in others, a high average-rate of sickness, and a low rate of mortality. In the case

of miners and colliers, the rate of mortality increases with the rate of sickness; this result does not appear in many of the other classes.

The following table shows the excess of sickness experienced by miners and colliers, as compared with the general class of lives, the experience of that of Mr. Finlaison, and the Manchester Unity of 1855-60, excluding miners and colliers.

EXCESS OF SICKNESS EXPERIENCED BY MINERS, OVER THAT OF WITH THE GENERAL CLASS OF MEMBERS.

Age.	Manchester Unity, 1846-8.	Mr. Finlaison.	Manchester Unity, 1860.
20	.2697= 0 1 21	.3345= 0 2 8	.2887= 0 0 5
30	.5665= 0 3 23	.4302= 0 3 0	.5313= 0 3 18
40	.8478= 0 5 22	.5015= 0 3 12	1.0388= 0 5 11
50	1.4218= 1 2 23	1.3368= 1 2 9	1.4704= 1 3 0
60	2.3610= 2 2 13	1.8645= 1 2 13	2.8538= 2 5 8
	5.4668= 5 3 6	3.9675= 3 6 18	6.1780= 5 3 13

The excess of sickness, from the experience of the Unity or that of Mr. Finlaison, appears to increase in rate at every period of life. When the aggregate sickness experienced is taken into account from age 20 to 60, the following is the result:—

				WEEKS.
Aggregate sickness of miners,	Manchester Unity,	1846-8	...	95.6973
"	"	"	Mr. Finlaison, ...	84.2739
"	"	"	Manchester Unity, 1856-60,	98.3705
Aggregate sickness,	Manchester Unity,	all classes, 1856-60,	...	57.6857
Excess over Manchester Unity	by miners,	1846-8,	...	38.0116
"	"	Mr. Finlaison, miners,	...	26.5882
"	"	Miners, 1856-60,	...	40.6848

In analyzing the returns from the various Societies, it was noticed that a large number of miners, in proportion to other trades, experienced sickness, either for a longer or shorter period, and the experience given by Mr. Finlaison, corroborates this result. Miners do not appear to experience a more lengthened sickness than other persons, but more persons, out of a certain number, fall sick, than in other classes. The following, taken from the experience of Mr. Finlaison, gives the number of persons sick out of each 100 members liable to sickness:—

AVERAGE SICKNESS FOR EACH PERSON SICK. GENERAL CLASS OF LIVES AND MINERS AND COLLIERS.

AGE.	GENERAL CLASS.			MINERS AND COLLIERS.		
	Weeks.	W. D. H.		Weeks.	W. D. H.	
20	3.6938=3	4	21	3.8133=3	5	17
30	4.3751=4	2	15	4.3641=4	2	13
40	5.0445=5	0	7	4.9977=4	5	0
50	6.3118=6	2	4	7.5000=7	3	12
60	8.6136=8	4	7	8.4535=8	3	4

In consequence of the high rate of sickness experienced by this class of members, the large number of persons so occupied, and in many instances societies being composed principally of miners and colliers, it was considered advisable that separate tables of the values of annuities, sick gifts, assurance at death, and the annual premiums equivalent thereto, should be prepared; not necessarily for adoption under all circumstances, but for showing the higher rate of contribution requisite for the class of members where more than an average number belong to one society.

It has been already stated that miners form 5.76 per cent. of the general class of lives, and if each society had this number per cent. of miners and colliers forming a portion thereof, the general tables might give a sufficient amount of contribution; but as it is a well known fact, that there are societies in certain localities, in which they form a greater per centage than the one named, it is absolutely necessary, for future safety, that a higher rate of contribution should be paid for similar benefits, than in societies which do not include so high a rate per cent. of this class of members.

The value of an annuity is nearly five per cent. less at the early ages than one in accordance with the rate of mortality in the general class of lives. This increased price of annuity arises from the fact that this class of persons would not live so long to receive the same. A contribution paid by members is an annuity payable, and equal to an annuity receivable; therefore to contribute an equal amount during a life time, miners and colliers should pay more per annum than other members who live longer. Table XXIV. gives the value of an annuity for rural, town, and city districts combined; the same for miners and colliers only, in those districts; and for the combined districts, excluding miners and colliers.

TABLE XIX.

PRESENT VALUE OF AN ANNUITY PAYABLE DURING LIFE.—MORTALITY, MANCHESTER UNITY
RURAL, TOWN, AND CITY DISTRICTS: RURAL, TOWN, AND CITY DISTRICTS, MINERS AND
COLLIERS ONLY: RURAL, TOWN, AND CITY DISTRICTS, EXCLUDING MINERS AND COLLIERS.
INTEREST, THREE PER CENT.

Age.	Rural, Town, and City Districts.				Rural, Town, and City Districts. Miners and Colliers.				Rural, Town, and City Districts. Miners and Colliers excluded.						
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.			
20	21.7988	=	21	16	0	20.7397	=	20	14	9	21.8137	=	21	16	3
25	20.9141	=	20	18	3	19.7079	=	19	14	2	20.9049	=	20	18	1
30	19.6508	=	19	13	0	18.6636	=	18	13	3	19.7697	=	19	15	6
35	18.3512	=	18	7	0	17.7461	=	17	14	11	18.4658	=	18	9	4
40	16.9431	=	16	18	10	16.4953	=	16	9	11	16.9802	=	16	19	7
45	15.3650	=	15	7	4	14.9888	=	14	19	9	15.4273	=	15	8	7
50	13.6785	=	13	13	7	13.4215	=	13	8	5	13.7564	=	13	15	1
55	11.9324	=	11	18	8	11.1993	=	11	4	0	11.0672	=	11	19	4
60	10.1017	=	10	2	0	9.4180	=	9	8	4	10.2148	=	10	4	3

It will be seen from the preceding Table, that miners and colliers, included in the general class and forming 5.76 per cent. thereof, do not to any extent decrease the value of an annuity; the greatest difference of the present value of an annuity payable during life, by members of the general class, including miners and colliers, and the general class excluding them, amounts only to two shillings and sixpence, being an increase of .63 = £0 : 12 : 7 per cent. upon the present value of the annuity, when miners and colliers are included.

The increased average sickness experienced by miners and colliers, shows itself to a great extent at the early ages. From this cause arises the increased value of a sick allowance, the greatest difference being at the early ages, the difference decreasing as the members advance in age. Taking the value of a sick gift, payable to 70 years of age, the present value at age 20, of £1 per week for miners and colliers, will be found to be 51.6 per cent. higher than the value for the general class of lives; but at each period from that time the difference in the per centage decreases. For a sick allowance during life, when miners and colliers are excluded from the general class, the decreased value of a sick gift is little more than half per cent., and at each period, it will be seen from the following table, the difference becomes less. On arriving at the age 60, the difference in value is only £.1789 = £0 : 3 : 6 on £96 : 3 : 2, the present value at that age.

TABLE XX.

PRESENT VALUE OF SICK GIFT FOR LIFE—RURAL, TOWN, AND CITY—WITH AND WITHOUT MINERS AND COLLIERS.—PRESENT VALUE OF SICK GIFT TO AGE 70, MINERS AND COLLIERS, AND RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

AGE.	PRESENT VALUE OF SICK GIFT FOR LIFE.								PRESENT VALUE OF SICK GIFT TO AGE 70.							
	Rural, Town, and City, With Miners and Colliers.				Rural, Town, and City, Miners and Colliers excluded.				Rural, Town, and City, Miners and Colliers.				Rural, Town, and City, Including Miners & Colliers.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	41.1507	=41	3	0	40.8304	=40	16	7	46.5574	=46	11	1	30.6817	=30	13	8
25	45.2317	=45	4	7	44.8377	=44	16	9	49.9469	=49	18	11	33.3450	=33	6	11
30	49.9701	=49	19	5	49.5923	=49	11	10	54.5250	=54	10	6	35.6496	=35	13	0
35	55.4876	=55	9	9	55.2914	=55	5	10	59.4555	=59	9	1	38.2717	=38	5	5
40	61.9567	=61	19	1	61.2399	=61	4	9	63.7447	=63	14	10	41.0696	=41	1	5
45	69.2546	=69	5	1	68.8430	=68	16	10	66.2387	=66	4	9	43.5511	=43	11	0
50	77.3761	=77	7	6	76.6871	=76	13	9	67.4984	=67	10	0	45.5242	=45	10	6
55	86.5594	=86	11	2	85.9115	=85	18	3	67.4946	=67	9	11	45.9792	=45	19	7
60	96.3358	=96	6	8	96.1569	=96	3	2	59.5359	=59	10	8	42.2727	=42	5	5

On excluding miners and colliers from the general class of lives, the difference in the present value of an assurance at death is scarcely perceptible, as may be seen by reference to the following table. But when the present value of an assurance at death for miners

and colliers is separately obtained, it will be seen there is an increased value of nearly 10 per cent. at the first period, and a gradually decreasing per centage at the other periods, till at age 65 the difference almost disappears.

TABLE XXI.

PRESENT VALUE OF AN ASSURANCE OF £1 AT DEATH.—MORTALITY, RURAL, TOWN AND CITY DISTRICTS, INCLUDING MINERS AND COLLIERS: RURAL, TOWN, AND CITY DISTRICTS, EXCLUDING MINERS AND COLLIERS: AND FOR MINERS AND COLLIERS.—INTEREST, THREE PER CENT.

AGE.	PRESENT VALUE.											
	Rural, Town, and City, With Miners and Colliers.				Rural, Town, and City, Excluding Miners and Colliers.				Miners and Colliers.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	.3360	=0	6	8½	.3355	=0	6	8½	.3667	=0	7	4
25	.3618	=0	7	3	.3619	=0	7	3	.3968	=0	7	11½
30	.3966	=0	7	11	.3950	=0	7	11	.4272	=0	8	6½
35	.4363	=0	8	9	.4330	=0	8	8	.4540	=0	9	1
40	.4773	=0	9	6½	.4763	=0	9	6½	.4904	=0	9	9½
45	.5233	=0	10	5½	.5216	=0	10	5	.5343	=0	10	8½
50	.5724	=0	11	5½	.5702	=0	11	5	.5799	=0	11	7½
55	.6233	=0	12	5½	.6223	=0	12	5½	.6447	=0	12	11
60	.6766	=0	13	6½	.6830	=0	13	8	.6961	=0	13	11

In consequence of miners and colliers experiencing a higher rate of sickness than the general class of lives, the value of a sick allowance is very much increased. It has been shown, that the value of an annuity is less for this class of lives; it therefore follows that a much higher rate of contributions is required to be paid by these persons, as they receive a greater amount of sick benefits, and have less time, owing to the increased rate of mortality, to pay for the same. The annual contribution, payable at age 20 by the general class of lives, for an allowance of £1 per week, up to 70, is £1 8s. 1½d. and the annual contribution, payable by miners and colliers of the same age and for the same allowance, is £2 4s. 8d. being an increase of 58 per cent. on the payment made by the general class of members. At any other age in the table, a similar difference is apparent.

TABLE XXII.

ANNUAL PREMIUM, PAYABLE QUARTERLY, FOR A SICK ALLOWANCE OF £1 PER WEEK FOR LIFE.—MORTALITY AND SICKNESS.—RURAL, TOWN, AND CITY DISTRICTS, WITH MINERS AND COLLIERS; AND THE SAME, MINERS AND COLLIERS, EXCLUDED.—PRESENT VALUE OF A SICK ALLOWANCE OF £1 PER WEEK UP TO 70 YEARS OF AGE.—MORTALITY AND SICKNESS, RURAL, TOWN, AND CITY DISTRICTS; AND THE SAME FOR MINERS AND COLLIERS.—INTEREST, THREE PER CENT. PER ANNUM.

AGE.	ANNUAL PREMIUM, PAYABLE FOR LIFE.				ANNUAL PREMIUM, PAYABLE TO AGE 70.			
	Rural, Town, and City, Without Miners & Colliers.		Rural, Town, and City, With Miners and Colliers.		Rural, Town, and City, Including Miners & Colliers.		Miners and Colliers.	
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
20	1.8196	=1 16 4½	1.8351	=1 16 8½	1.4069	=1 8 1½	2.2384	=2 4 8
25	2.0826	=2 1 8	2.1000	=2 2 0	1.6034	=1 12 0½	2.5319	=2 10 7½
30	2.4316	=2 8 7½	2.4588	=2 9 2	1.8374	=1 16 9	2.9324	=2 18 7½
35	2.8962	=2 17 11	2.9240	=2 18 6	2.1388	=2 2 9½	3.3951	=3 7 10½
40	3.4785	=3 9 7	3.5266	=3 10 6½	2.5275	=2 10 6½	3.9697	=3 19 4½
45	4.2886	=4 5 9	4.3310	=4 6 7½	3.0310	=3 0 7½	4.6318	=4 12 7½
50	5.4065	=5 8 1½	5.4107	=5 8 2½	3.7068	=3 14 1½	5.4488	=5 8 11½

The annual premium required for an assurance of £1 at death, is also much higher than the annual premium payable by the general class of lives, for the reasons assigned relative to the increased rate of payment for a sick allowance. The increased premium for any of the following periods is about 12½ per cent. higher than the annual premium payable by the general class.

TABLE XXIII.

ANNUAL PREMIUM, PAYABLE DURING LIFE, FOR AN ASSURANCE OF £1 AT DEATH.—MORTALITY.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS: RURAL, TOWN, AND CITY DISTRICTS, EXCLUDING MINERS AND COLLIERS: AND MINERS AND COLLIERS.

	ANNUAL PREMIUM, FOR £1 AT DEATH.											
AGE.	Rural, Town, and City Districts.				Rural, Town, and City Districts, Excluding Miners & Colliers.				Miners and Colliers.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	.01498	=0	0	3½	.01498	=0	0	3½	.01716	=0	0	4
25	.01679	=0	0	4	.01681	=0	0	4	.01951	=0	0	4½
30	.01951	=0	0	4½	.01937	=0	0	4½	.02210	=0	0	5½
35	.02299	=0	0	5½	.02268	=0	0	5½	.02471	=0	0	6
40	.02717	=0	0	6½	.02705	=0	0	6½	.02864	=0	0	7
45	.03272	=0	0	7½	.03249	=0	0	7½	.03422	=0	0	8½
50	.04003	=0	0	9½	.03964	=0	0	9½	.04128	=0	0	10

Table XXV. gives the present value of an annuity of £1 per annum for life, the present value of an allowance of £1 per week in sickness, up to 70 years of age, and the present value of an assurance of £1 at death; mortality and sickness; miners and colliers of the rural, town, and city districts; interest, 3 per cent. per annum; and Table XXVI. gives the annual premium, payable quarterly, for those benefits.

TABLE XXIV.

MORTALITY.—MINERS AND COLLIERS.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per Cent.	Specific Intensity.
18	100000	912	.9126	109.57	47	71337	1204	1.6870	59.2
19	99088	896	.9040	110.61	48	70133	1263	1.8013	55.5
20	98192	879	.8955	111.67	49	68870	1331	1.9328	52.0
21	97313	855	.8784	113.84	50	67539	1405	2.0816	48.0
22	96458	837	.8678	115.23	51	66134	1486	2.2480	44.4
23	95621	826	.8638	115.76	52	64648	1550	2.3987	41.6
24	94795	821	.8664	115.42	53	63098	1620	2.5740	38.8
25	93974	823	.8756	114.20	54	61478	1631	2.6538	37.6
26	93151	830	.8913	112.29	55	59847	1647	2.7582	36.2
27	92321	855	.9257	108.02	56	58200	1657	2.8471	35.1
28	91466	895	.9789	102.15	57	56543	1681	2.9741	33.6
29	90571	952	1.0508	95.16	58	54862	1722	3.1390	31.8
30	89619	1023	1.1415	87.60	59	53140	1772	3.3418	29.9
31	88596	1106	1.2509	80.12	60	51368	1836	3.5827	27.9
32	87490	1160	1.3270	75.35	61	49532	1912	3.8614	25.8
33	86330	1182	1.3699	73.00	62	47620	1999	4.1995	23.8
34	85148	1174	1.3795	72.49	63	45621	2097	4.5969	21.7
35	83974	1138	1.3558	73.75	64	43524	2199	5.0537	19.7
36	82836	1075	1.2988	76.99	65	41325	2301	5.5698	17.9
37	81761	1030	1.2598	79.37	66	39024	2398	6.1452	16.2
38	80731	1024	1.2389	78.88	67	36626	2462	6.7218	14.8
39	79707	985	1.2361	80.90	68	34164	2493	7.2997	13.6
40	78722	985	1.2514	79.91	69	31671	2495	7.8788	12.6
41	77737	999	1.2847	77.83	70	29176	2468	8.4591	11.8
42	76738	1018	1.3273	75.34	71	26708	2301	8.6156	11.0
43	75720	1044	1.3792	72.50	72	24407	2140	8.7721	11.3
44	74676	1075	1.4402	69.43	73	22267	1988	8.9286	11.1
45	73601	1112	1.5106	66.19	74	20279	1842	9.0851	11.0
46	72489	1152	1.5901	62.88	75	18437	1704	9.2415	10.8

TABLE XXV.

PRESENT VALUE OF AN ANNUITY FOR LIFE; SICK GIFT OF £1 PER WEEK, PAYABLE TO AGE 70; AND AN ASSURANCE OF THE SUM OF £1 AT DEATH.—MORTALITY AND SICKNESS.—MINERS AND COLLIERIES, MANCHESTER UNITY, RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

Age.	Value of Annuity.				Value of Sick Gift.				Value of Assurance at Death.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	21.0832	=21	1	8	45.1380	=45	2	9	.3486	=0	7	0
19	20.9156	=20	18	3	45.8362	=45	16	9	.3616	=0	7	3
20	20.7397	=20	14	9	46.5574	=46	11	7	.3667	=0	7	4
21	20.5549	=20	11	1	47.2852	=47	5	8	.3721	=0	7	5
22	20.3516	=20	7	0	47.8084	=47	16	2	.3781	=0	7	7
23	20.1450	=20	2	11	48.5506	=48	11	0	.3841	=0	7	8½
24	19.9306	=19	18	7	49.2060	=49	4	1	.3903	=0	7	9½
25	19.7079	=19	14	2	49.9469	=49	18	11	.3968	=0	7	11½
26	19.4781	=19	9	7	51.3849	=51	7	8	.4035	=0	8	1
27	19.2429	=19	4	10	52.1226	=52	2	5	.4105	=0	8	2½
28	19.0055	=19	0	1	52.8888	=52	17	9	.4173	=0	8	4½
29	18.8902	=18	17	9	53.6831	=53	13	8	.4206	=0	8	5
30	18.6636	=18	13	3	54.5250	=54	10	6	.4272	=0	8	6½
31	18.4455	=18	8	11	55.4336	=55	8	8	.4336	=0	8	8
32	18.2656	=18	5	4	56.4268	=56	8	6	.4388	=0	8	9½
33	18.0664	=18	1	4	57.4780	=57	9	7	.4446	=0	8	10½
34	17.8667	=17	17	4	58.3936	=58	7	10	.4504	=0	9	0
35	17.7461	=17	14	11	59.4555	=59	9	1	.4540	=0	9	1
36	17.5296	=17	10	7	60.4730	=60	9	5	.4603	=0	9	2½
37	17.2929	=17	5	10	61.4061	=61	8	1	.4671	=0	9	4
38	17.0390	=17	0	9	62.2577	=62	5	2	.4745	=0	9	6
39	16.7758	=16	15	6	63.0486	=63	1	0	.4811	=0	9	7½
40	16.4953	=16	9	11	63.7447	=63	14	11	.4904	=0	9	9½
41	16.2055	=16	4	1	64.3655	=64	7	4	.4988	=0	9	11½
42	15.9090	=15	18	2	64.9195	=64	18	5	.5065	=0	10	1½
43	15.6066	=15	12	2	65.4094	=65	8	2	.5163	=0	10	4
44	15.2996	=15	6	0	65.8408	=65	16	10	.5252	=0	10	6
45	14.9888	=14	19	9	66.2387	=66	4	7	.5343	=0	10	8½
46	14.6754	=14	13	6	66.5717	=66	11	5	.5453	=0	10	11
47	14.3594	=14	7	2	66.8654	=66	17	4	.5527	=0	11	0½
48	14.0441	=14	0	10	67.1172	=67	2	4	.5618	=0	11	2½
49	13.7308	=13	14	7	67.3278	=67	6	7	.5709	=0	11	5
50	13.4215	=13	8	5	67.4984	=67	10	0	.5799	=0	11	7½
51	12.9772	=12	19	6	67.7843	=67	15	8	.5887	=0	11	9½
52	12.5329	=12	10	8	67.8884	=67	17	9	.5974	=0	11	11½
53	12.0886	=12	1	9	68.0424	=68	0	10	.6049	=0	12	1½
54	11.6443	=11	12	11	67.7488	=67	15	0	.6140	=0	12	3½
55	11.1998	=11	4	0	67.4946	=67	9	11	.6447	=0	12	11
56	10.8350	=10	16	8	66.6247	=66	12	6	.6552	=0	13	1½
57	10.4871	=10	9	9	65.5084	=65	10	2	.6656	=0	13	3½
58	10.1327	=10	2	8	63.9702	=63	19	5	.6757	=0	13	6
59	9.7998	=9	16	0	62.1218	=62	2	5	.6854	=0	13	8½
60	9.4180	=9	8	4	59.5359	=59	10	8	.6961	=0	13	11

TABLE XXVI.

ANNUAL PREMIUM, PAYABLE TO AGE 70, BY QUARTERLY INSTALMENTS, FOR AN ALLOWANCE OF £1 PER WEEK DURING SICKNESS, UP TO AGE 70; ANNUAL PREMIUM, PAYABLE UP TO THE SAME TIME, FOR AN ANNUITY OF £1 PER ANNUM, TO BE RECEIVED MONTHLY; AND ANNUAL PREMIUM, PAYABLE DURING LIFE, FOR AN ASSURANCE OF £1 AT DEATH.—SICKNESS AND MORTALITY, MINERS AND COLLIERS, MANCHESTER UNITY, RURAL, TOWN AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

AGE.	ANNUAL PREMIUM, PAYABLE											
	For Sick Gift.				For Assurance at Death.				For Annuity after age 70.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	2.1219	=2	2	5 $\frac{1}{4}$	.01606	=0	0	3 $\frac{3}{4}$	.02052	=0	0	5
19	2.1676	=2	3	4 $\frac{1}{4}$	.01679	=0	0	4	.02136	=0	0	5 $\frac{1}{4}$
20	2.2334	=2	4	8	.01716	=0	0	4	.02262	=0	0	5 $\frac{1}{2}$
21	2.2854	=2	5	8 $\frac{1}{2}$	.01757	=0	0	4 $\frac{1}{2}$	.02369	=0	0	5 $\frac{3}{4}$
22	2.3358	=2	6	8 $\frac{3}{4}$	.01802	=0	0	4 $\frac{1}{2}$	.02488	=0	0	6
23	2.3986	=2	7	11 $\frac{1}{2}$	.01849	=0	0	4 $\frac{1}{2}$	.02614	=0	0	6 $\frac{1}{4}$
24	2.4596	=2	9	2 $\frac{3}{4}$	.01899	=0	0	4 $\frac{3}{4}$	.02748	=0	0	6 $\frac{3}{4}$
25	2.5319	=2	10	7 $\frac{1}{2}$	.01951	=0	0	4 $\frac{3}{4}$	.02904	=0	0	7
26	2.6338	=2	12	8	.02004	=0	0	4 $\frac{3}{4}$	.03042	=0	0	7 $\frac{1}{4}$
27	2.7073	=2	14	2	.02066	=0	0	5	.03197	=0	0	7 $\frac{3}{4}$
28	2.7852	=2	15	8 $\frac{1}{2}$	.02125	=0	0	5	.03378	=0	0	8
29	2.8479	=2	16	11 $\frac{1}{2}$	.02170	=0	0	5 $\frac{1}{4}$	.03539	=0	0	8
30	2.9324	=2	18	7 $\frac{3}{4}$	.02210	=0	0	5 $\frac{1}{4}$	.03736	=0	0	9
31	3.0214	=3	0	5	.02273	=0	0	5 $\frac{1}{4}$	.03944	=0	0	9 $\frac{1}{2}$
32	3.1113	=3	2	2 $\frac{1}{2}$	.02323	=0	0	5 $\frac{1}{2}$	.04161	=0	0	10
33	3.2104	=3	4	2 $\frac{3}{4}$	.02379	=0	0	5 $\frac{1}{2}$	.04400	=0	0	10 $\frac{1}{2}$
34	3.3052	=3	6	1	.02436	=0	0	5 $\frac{3}{4}$	.04667	=0	0	11 $\frac{1}{4}$
35	3.3951	=3	7	10 $\frac{1}{4}$	.02471	=0	0	6	.04906	=0	0	11 $\frac{3}{4}$
36	3.5041	=3	10	1	.02535	=0	0	6 $\frac{1}{4}$	.05199	=0	1	0 $\frac{1}{4}$
37	3.6162	=3	12	4	.02607	=0	0	6 $\frac{1}{4}$	.05513	=0	1	1 $\frac{1}{4}$
38	3.7308	=3	14	7 $\frac{1}{2}$	.02686	=0	0	6 $\frac{1}{2}$	.05852	=0	1	2
39	3.8229	=3	16	5 $\frac{1}{2}$	.02771	=0	0	6 $\frac{3}{4}$	.06178	=0	1	2 $\frac{3}{4}$
40	3.9697	=3	19	4 $\frac{3}{4}$	.02864	=0	0	7	.06618	=0	1	3 $\frac{3}{4}$
41	4.0939	=4	1	10 $\frac{1}{4}$	.02964	=0	0	7	.07049	=0	1	5
42	4.2227	=4	4	5 $\frac{3}{4}$	.03064	=0	0	7 $\frac{1}{2}$	.07522	=0	1	6
43	4.3535	=4	7	1	.03255	=0	0	7 $\frac{3}{4}$	.08034	=0	1	7 $\frac{1}{4}$
44	4.4717	=4	9	5	.03298	=0	0	8	.08562	=0	1	8 $\frac{1}{2}$
45	4.6318	=4	12	7 $\frac{3}{4}$	.03422	=0	0	8 $\frac{1}{4}$	.09216	=0	1	10
46	4.7815	=4	15	7 $\frac{1}{2}$	.03564	=0	0	8 $\frac{1}{2}$	.09897	=0	1	11 $\frac{3}{4}$
47	4.9375	=4	18	9	.03688	=0	0	8 $\frac{3}{4}$	.10649	=0	2	1 $\frac{1}{2}$
48	5.0972	=5	1	11	.03829	=0	0	9 $\frac{1}{4}$	.11482	=0	2	3 $\frac{1}{2}$
49	5.2716	=5	5	5	.03977	=0	0	9 $\frac{1}{2}$	.12408	=0	2	5 $\frac{3}{4}$
50	5.4488	=5	8	11 $\frac{3}{4}$	.04128	=0	0	10	.13436	=0	2	8 $\frac{1}{4}$

Table LXI., giving the rate of mortality for rural, town, and city districts, with the numbers living and dying in each year, and the specific intensity for every year of life, after miners and colliers have been extracted therefrom, may be compared with Table XI., showing the rate of mortality of the general class of lives. Table LXII. gives the present value of £1 per annum for life, the present value of an allowance of £1 per week for life during sickness, and the present value of an annuity of £1 per annum after 70 years of age. Table LXIII. gives the annual premium, payable quarterly for life, for the above-named benefits.

During the preparation of these tables, finding the present value for a sick gift and an assurance at death for miners and colliers, when taken separately, and the annual premiums payable for the same, so high in comparison with the general class, it was considered that many societies not having any of their members following this occupation, might imagine that a much less rate of contribution would be sufficient to meet their liabilities. For the purpose of preventing misunderstanding on the subject these tables, excluding miners and colliers, were prepared.

As it has been assumed that the annual contribution is payable quarterly, it may be as well to state, that in practise it has been found that such is the case. In the Manchester Unity, the members are generally allowed a certain time for payment, and, taking the average, the contribution cannot be received and invested oftener than quarterly; therefore this period has been taken as the basis of the payments made by members.

PLUMBERS AND PAINTERS.

Plumbers and painters show a less rate of mortality at the early decennial periods of life; age 20 and 30, but at the periods of 40, 50, and 60, there appears a higher rate of mortality than in the general class of lives. The rate of mortality decreases from age 18 to age 25; after this it increases at every age to the end of the table, giving an aggregate rate for the five periods of 1.8613 per cent. over the general class of lives.

The rate of mortality for 1846-8 was considerably higher at the periods 20, 30, and 60, and showed an aggregate in excess of the Unity, 1856-60, for the same five periods, of 1.5973 per cent.

The rate of mortality and average rate of sickness has been given by Mr. Finlaison for painters, and the average rate of mortality for plumbers and painters by Mr. Neison. It may be as well here to observe, that Mr. Neison does not give the sickness experienced by different trades. The following table gives the average rate of mortality from the four different data.

AVERAGE RATE OF MORTALITY:

Age.	Mr. Nelson.	Manchester Unity, 1846-8.	Mr. Finlaison.	Manchester Unity, 1856-60.
20.	1.5588	1.3940		.6848
30	1.2482	.8434	.88	.7040
40	1.2651	1.3035	2.04	1.3913
50	2.0329	2.3818	2.87	3.0282
60	4.9050	5.2099	6.06	3.7350
	11.0100	11.1326	11.85	9.5353

The aggregate rate of mortality appears the most from the experience of Mr. Finlaison, with only four periods included, and the least aggregate rate of mortality for the five decennial periods appears from the experience of the Unity in 1856-60.

The average rate of sickness is least at age 18; and from that period there is a continued increase at every age in the table. The same rule obtained in the experience of 1846-8, the least average sickness being at age 18, and an increase for every year of life. Taking the experience of Mr. Finlaison, the average rate appears to decrease from age 20 to age 25; from that age, there is an increase up to age 71, with a small intermission from ages 57 to 61. The average amount of sickness is given in the following table according to each of the data named.

AVERAGE RATE OF SICKNESS.

Age.	Manchester Unity, 1846-8.		Mr. Finlaison.		Manchester Unity, 1856-60.	
	Weeks.	W. D. H.	Weeks.	W. D. H.	Weeks.	W. D. H.
20	.6804	= 0 4 18	1.0830	= 1 0 14	.6740	= 0 4 17
30	.7869	= 0 5 12	1.0224	= 1 0 4	.8402	= 0 5 21
40	1.1471	= 1 1 1	1.2092	= 1 1 11	1.4523	= 1 3 4
50	2.6696	= 2 4 17	2.4041	= 2 2 20	1.9270	= 1 6 12
60	3.9081	= 3 6 9	2.6200	= 2 4 8	3.7350	= 3 5 3

The average rate of sickness appears greatest at the early ages, from the experience of Mr. Finlaison, and at the two latter periods, from the experience of the Unity, 1846-8. But a better opinion may be formed by referring to the aggregate sickness experienced by each for the period from 20 to 60 years, which, in the Unity for 1846-8, is $67.6094 = 67$ weeks, 4 days, 6 hours; by the experience of Mr. Finlaison, $67.0799 = 67$ weeks, 13 hours; and by the experience of the Unity, in 1856-60, $61.5250 = 61$ weeks, 3 days, 16 hours; each of these showing an excess over the general class of lives of the Manchester Unity.

POTTERS.

Potters at the early ages in the table appear to experience a very low rate of mortality, but it afterwards increases so as to be higher than the general class at age 32, and continues increasing up to age 39, when a slight decrease takes place. At age 49, the rate of mortality again exceeds that of the general class, and continues in excess to the end of the table.

As previously stated, the rate is very low at age 20. At age 30, it approaches that of the general class of lives. At ages 40 and 50, it considerably exceeds the same; but at age 60, the excess in comparison with the general class of lives is greatest. The aggregate mortality on the five periods gives an increase of 3.1282 per cent. above the general class of lives; and in 1846-8, the aggregate rate for the same period was 10.1597, being .6427 per cent. for the five periods higher in 1856-60 than in 1846-8.

The average rate of sickness appears in the early ages to follow that experienced by the general class of lives, showing a decrease in the rate of sickness from age 18 to 24, but afterwards an increased rate upon each year's sickness up to age 46. Another decrease then sets in, and reaches the lowest point at age 50; from thence a rapid increase takes place, which causes this class of lives to experience an aggregate of sickness, of $61.2214 = 61$

weeks, 1 day, 18 hours, in passing from age 20 to 60 years, being an excess of $3.5357 = 3$ weeks, 3 days, 18 hours, in comparison with the general class of lives.

The lives under observation, from the experience of 1846-8, were very few, and especially at the higher ages. To this may be attributed the very high rate of sickness experienced from 55 to 65. The excessive average rate at age 60, and a few years previous and after, caused that experience to show an aggregate, for the period from 20 to 60, of $89.2948 = 89$ weeks, 2 days, 1 hour.

LETTER-PRESS PRINTERS AND COMPOSITORS.

The rate of mortality is very low in this class of lives at the early part of the table. It gradually increases up to age 24, then decreases up to age 31. From this age up to age 39, a slow increase is again apparent. The rate lessens up to 42, and from that age again increases to age 49, when another slight decrease takes place to age 52. From that age the increase is in a greater ratio to the end of the table.

In comparison with the general class of lives, the rate of mortality is less at the decennial periods of life, age 20 and 30, and greater at the periods of 40, 50, and 60. The rate of mortality at the last named periods, as compared with the same five periods of the general class of lives, shows an excess of 1.8419 per cent.

In the experience of 1846-8, the rate of mortality was less at the decennial periods, age 20 and 30; and at age 40, 50, and 60, the rate was so increased as to show, for those five periods, as compared with the same periods, and for the same class of lives, with the experience of 1856-60, an aggregate rate of mortality, in 1846-8, of 3.3765 per cent. higher.

The average rate of sickness decreases from age 18 to age 28. An increase then takes place, which continues to age 63, when a slight decrease is found to age 70. The average rate of sickness, when compared with the general class of lives, appears less at ages 30 and 50, but the increased average rate of sickness at the period 20, very slightly at age 40 and at age 60, is not sufficient to counterbalance the decreased rate of average sickness at the first-named period. It may be seen that the aggregate sickness for the five periods is only $54.9808 = 54$ weeks, 4 days, 21 hours, being $2.7057 = 2$ weeks, 4 days, 22 hours less than the aggregate of the general class of lives.

In the years 1846-8, the average rate of sickness was also less at the two first periods, and also at the age 30; but the high rate of sickness experienced at the ages 50 to 60 increased the aggregate to the extent of $61.5925 = 61$ weeks, 4 days, 4 hours, being an excess in this class of lives for 1856-60, of $6.6125 = 6$ weeks, 4 days, 7 hours, and an excess over the general class of lives in that data, of $3.9068 = 3$ weeks, 6 days, 8 hours.

S A W Y E R S .

Sawyers experience a less rate of mortality at each of the periods of age 20, 30, 40, 50 and 60. From this experience, they show a less aggregate rate of mortality for the five periods than appeared in 1846-8. According to that data, the excess of aggregate mortality for those periods was 1.3261 per cent. higher than the general class; from the present experience, the decrease on the five periods is 1.4777 per cent. lower than the general class for the same period.

In comparison with the general class, they experience a less rate of mortality at each of the five decennial periods, the least difference being at age 60, and the greatest at age 20.

The average sickness, when compared with the general class, shows a higher rate at ages 30, 40, 50, and 60. At age 20, the average rate is greater in the general class of lives; this high rate of average sickness gives an excess of aggregate sickness experienced by this class of lives of $19.2532 = 19$ weeks, 1 day, 18 hours, equal to 33 per cent. above the general class, from age 20 to 60.

On comparing the average rate of sickness of this class of lives with the experience of the same class in the years 1846-8, they appear to approximate at the ages 20, 30, 40, and 50; but, on the addition of age 60 thereto, owing probably to the small number of lives at higher ages in the years 1846-8, a greater difference in the aggregate sickness is observed.

S E R V A N T S .

This class of lives is composed principally of in-door servants or valets, footmen, &c. At the early ages, the rate of mortality is very favourable, particularly at the decennial periods of age, 20, 30, 50. There is a slightly increased rate at 40, and a greatly increased rate at 60. On the whole, the five periods show an aggregate increased rate of mortality of .4822 per cent.

The rate of mortality is lowest at the early ages, and gradually increasing to age 39. From the latter age to 43 there is a gradual decreasing. After this time an increase takes place at every year of life to the end of the table.

On comparison with the experience of the Unity for the years 1846-8, there appears very little difference in the rate of mortality until the last period in the table, age 60; and the difference at this age is about equal to the difference existing in the aggregate rate of mortality for the five periods, amounting to .6837 per cent.

The average rate of sickness is less at the periods of 20, 40, and 60, and greater at the periods of 30 and 50; but in no case is there that difference to cause a much higher aggregate sickness for the period of life from 20 to 60, as the difference in the aggregate sickness of the two classes for that period only shows an excess in the servant's class of lives of $1.1076 = 1$ week, 18 hours.

In 1846-8, the average rate of sickness was less at the periods of life, 20, 30, 40, and 50, and a small degree greater at age 60; and the aggregate sickness being only $45.9512 = 45$ weeks, 6 days, 16 hours, and the present rate for this class of lives being $58.7933 = 58$ weeks, 5 days, 21 hours, shows an aggregate sickness of $12.8421 = 12$ weeks, 5 days, 21 hours, more than experienced in 1846-8.

S H O E M A K E R S .

The rate of mortality amongst this class of persons is least at age 23, a small decrease taking place from 18 to that age. An increase then takes place to age 29. Another slight decrease then takes place to age 33; and, from the latter age, the increase continues during every year of life.

The average mortality, as compared with the general class of lives, shows a less rate at each decennial period, 20, 30, 40, 50, and 60.

At age 20 the difference is .1464			
"	30	"	.0643
"	40	"	.1641
"	50	"	.4285
"	60	"	.1334

showing a less aggregate rate of mortality for the five periods of .9367 per cent.; and taking the aggregate rate of mortality from the experience of 1846-8, amounting to 6.0229, gave a less aggregate of .7144 than appears for this class of lives from the experience of 1856-60, arising principally from the less average mortality experienced at age 60.

Shoemakers are a favoured class in comparison with the general class of lives, so far as regards sickness, the average amount being less at every decennial period of life. The sickness increases gradually, according to age, one period only excepted, from age 20 to 31, where a small decrease is observed. The aggregate sickness experienced in passing through 40 years of life, is $53.2778 = 53$ weeks, 1 day, 23 hours, and that of the general class being $57.6857 = 57$ weeks, 4 days, 19 hours, gives a less aggregate in favour of this class of lives of $4.4079 = 4$ weeks, 2 days, 20 hours.

In the experience of 1846-8, the average rate of sickness gradually increased up to age 25. From that age a small decrease is shown to age 30, and after that age an increased rate appeared for every year of life. On comparing the average sickness of shoemakers in 1856-60, with the same trade in 1846-48, the average sickness is seen to be higher in the first named experience at each of the periods 20, 30, 40, 50, and 60. This increased average sickness causes an increased aggregate sickness of only $2.9300 = 2$ weeks, 6 days, 12 hours, in passing through forty years of life from age 20 to 60; thus confirming the former results for this class of lives, but with a greater amount of experience.

SPINNERS.

Operative spinners appear to experience a less rate of mortality than persons employed in the other branches of cotton spinning, and especially so at the higher ages. The rate of mortality is low but regular from the first to the last ages in the table. When compared with other mill operatives, from the experience of 1856-60, the result is in their favour, as follows:—

	Mill Operatives.	Spinners.
Rate of Mortality at age 20,	.4605 =	.5093
„ 30,	.6865 =	.8404
„ 40,	1.0652 =	1.0085
„ 50,	2.1502 =	1.7504
„ 60,	4.4840 =	3.0114
	<hr/>	<hr/>
	8.8464	7.1200
	<hr/>	<hr/>

The aggregate mortality experienced by cotton spinners, is 24 per cent. in their favour over mill operatives for the five decennial periods.

When the rate of mortality is compared with the general class of lives, a slight increase is observable at the periods, age 30 and 50. At the other periods, 20, 40, and 60, the rate of mortality is least in this class of lives. For the five periods, the aggregate mortality is .6540 per cent. less than in the general class of lives.

On comparing the rate of mortality experienced by spinners in 1846-8, the difference is found to be very little at the middle ages, 30, 40, and 50, that experience at those ages containing a fair number of lives; but, probably owing to the small amount of experience at the early and late ages, the rate of mortality is very high for those periods, the whole giving an aggregate higher than the experience of 1860.

The average rate of sickness experienced by spinners, is lowest at age 18, and throughout the table an increase takes place at every age of life. The average rate at the early decennial periods, age 20, 30, and 40, is less than that experienced by the general class; but in the later periods, 50 and 60, the average sickness is greater. This increased average sickness, at the later periods of life, augments the aggregate sickness $.8208 = 5$ days, 17 hours, above that experienced by the general class of lives. When compared with the same trade, 1846-8, a less average sickness is seen at the period, age 20, but a much higher rate at each of the other periods, 30, 40, 50, and 60. The total gives an aggregate of sickness, $11.6759 = 11$ weeks, 4 days, 17 hours greater in 1846-8 than appears from the present experience.

STONEMASONS.

The rate of mortality in this class of lives is very high, with the exception of the decennial period, age 20; the greatest increase in this over that of the general class of lives being 2.4841 per cent. at age 60. Taking the aggregate mortality for the five periods, there appears an excess over that of the general class of lives, of 4.9396 per cent.; and, although these results may not be fully borne out by the experience of 1846-8, that experience shows a much higher rate of mortality in this than in the general class of lives. The mortality is regular in increasing from year to year; and, although the aggregate rate in 1846-8 is not so high as appears by the experience of 1856-60, it still shows the same to be excessive in this class.

With the high rate of mortality in the experience of 1846-8, and the higher rate in 1856-60, the average rate of sickness experienced in the year 1846-8, appears much higher than in the general class; and that of 1856-60 much higher than the experience of 1846-8. From the experience of 1846-8, the average rate of sickness appears to increase at every year of life, but in the experience of 1856-60 there is a very slight decrease, amounting to one hour per annum at ages 30-1. With the exception of this slight decrease, the average sickness increases at every age. At the decennial period, age 20, both the experience of 1846-8 and that of 1856-60 show a less average sickness, and at each of the other periods the average is greater. The aggregate for the 40 years, 1846-8, is $75.4998 = 75$ weeks, 3 days, 12 hours, and the aggregate for the same period, from the experience of 1856-60, is $81.3836 = 81$ weeks, 2 days, 16 hours, showing an excess in the former instance of $17.8141 = 17$ weeks, 5 days, 18 hours, and in the latter instance an excess of $23.6979 = 23$ weeks, 4 days, 21 hours over the aggregate sickness of the general class of lives.

TAILORS.

Tailors experience a higher rate of mortality than the general class of lives. Taking the decennial periods, ages 20, 30, and 60, there appears a higher rate of mortality in each. On referring to the rate of mortality year by year, there appears an increase up to age 24; from that time to 37, a small decrease takes place; and after that age, an increase at every age. In the rate of mortality, according to the experience of 1846-8, greater fluctuation appears in the same period, the aggregate rate for the five periods, 1856-60, being 8.4290, which gives an increase of .7550 per cent. over the general class of lives; but

in the experience of 1846-8, the aggregate mortality being 7.4906, is .1834 per cent. less than in the general class of lives from the experience of 1856-60.

In the experience of the Manchester Unity, 1846-8, the average rate of sickness in this class at each decennial period of life, ages 20, 30, 40, 50, and 60, was less than in the general class of lives of 1856-60. Tailors, in 1846-50, at each period, age 40 excepted, also show a less average sickness than appears from the experience of the same class in 1856-60. The average sickness, taken year by year, showed, in two instances, a decrease of one hour per annum. In every other instance it is stationary occasionally for two or three years, up to 35, when an increase takes place for every year of life. The aggregate sickness in 1846-8, for the years 20-60, is $48.5216 = 48$ weeks, 3 days, 16 hours, giving a less aggregate of $9.1641 = 9$ weeks, 1 day, 4 hours than the general class of lives. The aggregate, from the experience of 1856-60, is $57.2082 = 57$ weeks, 1 day, 11 hours, giving an aggregate sickness of .4775 = 3 days, 8 hours less than the aggregate of the general class of lives for the same years.

W A T E R M E N .

Includes mariners and sailors, which occupation was not classified in the experience of the Unity for the year 1846-8, but from the experience of this class of persons given by Mr. Finlaison, the following shows the rate of mortality and average sickness at each decennial period of life:—

AGE.	MR. FINLAISON.—MARINERS.	
	Rate of Mortality.	Sickness per Cent.
20	.66	.7483
30	1.69	.9413
40	1.79	1.1418
50	2.48	1.9150
60	2.79	3.5071

The rate of mortality in the Manchester Unity, at age 20, exceeds the rate of mortality experienced from the data of Mr. Finlaison. At age 30, the difference in favour of the Unity is very small. At age 40, the rate of Mr. Finlaison exceeds that of the Unity by .23, at age 50, by .74; and at age 60, the mortality of the Unity exceeds that of Mr. Finlaison by .22 per cent. But taking the aggregate mortality for the five periods, Mr. Finlaison's being 9.41, and the Manchester Unity 9.59, the difference is only .18 per cent.

The average sickness at age 20 is less in amount by Mr. Finlaison's experience than by that of the Unity, the difference being $.1647 = 1$ day, 4 hours, per annum. The largest amount at age 30, appears to be experienced by the members of the Unity, the difference being $.0614 = 10$ hours per annum. The highest amount at age 40, is experienced by the members of the Unity, the excess being $.1880 = 1$ day, 8 hours, per annum; and the highest amount of sickness experienced at ages 50 and 60 is by the persons in Mr. Finlaison's tables, the difference, being in the former, $.2070 = 1$ day, 11 hours, and in the latter, $.0349 = 6$ hours. Taking the aggregate sickness in passing through 40 years of life,

from 20 to 60 years, the aggregate sickness by Mr. Finlaison's experience is $59.6687 = 59$ weeks, 4 days, 16 hours, and by that of the experience of the Unity, $54.0492 = 54$ weeks, 8 hours, showing an excess by Mr. Finlaison of 5.6195.

In the latter instance, we have experience obtained from two distinct and separate sources; one from data collected in the five years preceding the last day of December, 1850; and the other from data experienced in the five years preceding the last day of December, 1860; a combination, no doubt, of different elements, such as, to a certain extent, must affect the results; yet the difference in the rate of mortality for the aggregate of five decennial periods is only .18 per cent., showing that although the rate may be higher at one particular age in one experience and lower at another age, on taking a number of periods, and with a fair amount of experience, the average rates of mortality, from different experiences, under similar circumstances, present but slight variation from each other.

WEAVERS.

The rate of mortality in this class of lives, at the early ages in the table, is far above the general average, and it decreases to age 29. From the latter age to the end of the table, an increase takes place at every year of life.

Taking the experience for the years 1856-60 at age 20, the rate of mortality of weavers, from the data of 1846-8 and 1856-60, is higher than in the general class. At age 30, the highest rate appears in the Unity combined. The rate of mortality, from the experience 1846-8 and 1856-60, among weavers appears to be nearly uniform at each decennial period. The aggregate for the five decennial periods, for 1846-8, gives 7.0658, a decrease in the aggregate mortality, when compared with the general class of 1856-60, of .6082 per cent.; and the aggregate rate for the same period, from the experience of 1856-60, gives a mortality of .4554 per cent. less than the general class of lives, and .1528 per cent. greater rate than the same class of lives, from the experience 1846-8, a very near approximation, considering that a period of more than twelve years had elapsed between the collection of one data and that of the other.

From the experience of this class of lives in the year 1846-8, the average sickness appears to be very regular, and shows an increased rate at every age in the table. With regard to the average rate of sickness from the present experience, the same remarks are applicable. Taking the average sickness for the five decennial periods for this selected trade, the greatest difference will be found at age 60, the one giving an average of $4.5206 = 4$ weeks, 3 days, 15 hours, and the other, the experience of 1856-60, giving an average amounting to $3.7863 = 3$ weeks, 5 days, 12 hours. When the aggregate sickness is compared with that of the general class for the periods 20-60, an increase appears, in the amount from this class of lives for 1846-8, of $5.7855 = 5$ weeks, 5 days, 12 hours, but in the aggregate sickness of weavers for 1856-60, there does not appear one day's sickness difference in passing through 40 years of life.

WHEELWRIGHTS.

In the experience of 1846-8, the average rate of mortality for this class of lives appears to be more fluctuating than usual, arising, no doubt, from the small number of lives then under examination increasing and decreasing the rate of mortality at four different periods.

Notwithstanding this aberration, taking the five periods, ages 20, 30, 40, 50, and 60, with the exception of 30, there is an increased rate over the previous period; and taking the aggregate mortality for the five periods, there appears to be an increase on those periods of .8050 per cent., in comparison with the general class of lives.

With an increase in the amount of experience comes a greater regularity in the rate of mortality. The lives now under consideration, from the data of 1856-60, being more numerous than in the data of 1846-8, the rate of mortality appears more regular or uniform, decreasing until the lowest rate is experienced. From this age an increase in the rate is apparent at every advanced period of life.

The rate of mortality, from the experience of 1856-60, at the ages 20 and 30, follows the rule observed in the districts combined, being the highest at 20. The aggregate for the five periods being 7.5520, shows a less mortality of .1240 per cent. as compared with the general class of lives of the same year.

The average rate of sickness, from the experience of 1846-8, appears very low at the early ages, in fact, not 50 per cent. of that experienced by the general class of lives. From that period, age 18 up to age 32, the increase has been so rapid, that at age 32 the average sickness is greater than in the general class. From thence to age 49, another decrease is observable, so that the average rate at age 50, is less than in either of the preceding decennial periods. From age 49 to the end of the table, an increase takes place at every age of life.

The average rate of sickness in this class of lives, from the experience of the Unity in 1856-60, appears more regular than in the one just referred to. The rate at the early age in the table is higher than in the general class of lives; but from that early age, with a slight exception at 28, a decrease takes place in the average rate of sickness up to age 34, and from this latter age, an increase is observable at every year of life to the end of the table.

In the experience of 1846-8, the average rate of sickness at age 30, is greater in this than in the general class of lives; but at the other decennial periods, 20, 40, 50, and 60, the average sickness is greater. The aggregate sickness in the general class of lives, 1856-60, gives an excess of $22.9860 = 22$ weeks, 6 days, 22 hours over wheelwrights, from the data of 1846-8. The experience of this class of lives in the years 1856-60, appears higher than the general class at the decennial period of 20; and the average sickness appears greater at the other periods, 30, 40, 50, and 60, in the general class of lives, showing a decreased aggregate sickness of $9.4712 = 9$ weeks, 3 days, 7 hours experienced by wheelwrights in passing from 20 to 60 years of age.

WOOLCOMBERS.

The small amount of experience amongst woolcombers in the years 1846-8, in all probability, caused the fluctuation in the rate of mortality which then appeared. Out of 68 members, age 18-20, no less than three deaths occurred, causing the rate at these ages to range very high. With more experience, this high rate would have been considerably modified. There is considerably more experience in the year 1856-60, but still not that quantity which appears in other selected trades, and on this account, doubtless, arises the great fluctuations in the rate of mortality as compared with other classes. With this fluctuation appears such an increased rate of mortality, as to give an aggregate, for

the five decennial periods, ages 20, 30, 40, 50, and 60, of 10.1589, from the experience of 1860, and 11.5306 per cent. from the experience of 1846-8, the latter showing an excess of 3.8566, and the former, 2.4849 per cent. for the periods named.

Although the mortality fluctuates in certain trades, on account of the less amount of experience, one or more additional or less deaths increasing or decreasing the rate, yet such is not the case to the same extent with sickness, although with few lives it will fluctuate to some extent. With an increase in age, taking each decennial period, there are few instances where a progressive increase does not take place in the average rate of sickness. On referring to the table of sickness for woolcombers, 1846-8, it will be found, taking the average rate for each year, that there is a decrease of the rate of sickness from age 18 to 27; but the increased amount from 27 to 30 raises the sickness at 30 higher than at the previous decennial period, 20; and there are few exceptions to this rule, whether the experience of 1846-8 or that of 1856-60 be taken. This class of lives shows a higher average sickness at later periods of life than the general class, the aggregate sickness for the years 1846-8 being $68.7563 = 68$ weeks, 5 days, 7 hours, an excess of $11.0706 = 11$ weeks, 12 hours, over that of the general class of lives of 1856-60, and the aggregate sickness for the year 1860 being 59.3841, shows an excess of $1.6982 = 1$ week, 4 days, 21 hours. The more favourable state of the last experience arises from the average sickness of 1856-60, for the three first and last periods, being more favourable than appeared in 1846-8.

The following tables give the adjusted average sickness, and the rate of mortality; also the aggregate sickness of the whole of the trades combined, and of each trade separate and distinct.

TABLE XXVII.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS OF THE MANCHESTER UNITY, THE SELECTED TRADES ONLY INCLUDED.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	Mortality per Cent.	Sickness per Annum.			Age.	Mortality per Cent.	Sickness per Annum.		
		Weeks.	W.	D. H.			Weeks.	W.	D. H.
18	.8206	.8388	=0	5 21	31	.8202	.8979	=0	6 7
19	.8072	.8397	=0	5 21	32	.8409	.9139	=0	6 9
20	.7938	.8411	=0	5 21	33	.8624	.9360	=0	6 13
21	.7669	.8434	=0	5 21	34	.8847	.9643	=0	6 18
22	.7473	.8461	=0	5 22	35	.9080	.9987	=1	0 0
23	.7350	.8491	=0	5 23	36	.9321	1.0392	=1	0 7
24	.7300	.8525	=0	5 23	37	.9620	1.0824	=1	0 14
25	.7322	.8562	=0	6 0	38	.9975	1.1283	=1	0 22
26	.7417	.8602	=0	6 1	39	1.0388	1.1768	=1	1 6
27	.7533	.8653	=0	6 1	40	1.0859	1.2281	=1	1 14
28	.7670	.8717	=0	6 2	41	1.1386	1.2819	=1	2 1
29	.7827	.8792	=0	6 4	42	1.1909	1.3389	=1	2 9
30	.8005	.8900	=0	6 6	43	1.2428	1.3989	=1	2 19

Age.	Mortality per Cent.	Sickness per Annum.		Age.	Mortality per Cent.	Sickness per Annum.	
		Weeks.	W. D. H.			Weeks.	W. D. H.
44	1.2943	1.4619=	1 3 6	57	2.6078	3.3285=	3 2 7
45	1.3455	1.5281=	1 3 17	58	2.8028	3.6123=	3 4 7
46	1.3962	1.5972=	1 4 4	59	3.0185	3.9086=	3 6 9
47	1.4517	1.6800=	1 4 18	60	3.2550	4.2774=	4 1 23
48	1.5201	1.7763=	1 5 10	61	3.5120	4.6586=	4 4 15
49	1.5974	1.8862=	1 6 5	62	3.7861	5.0520=	5 0 9
50	1.6876	2.0096=	2 0 2	63	4.0771	5.4579=	5 3 5
51	1.7826	2.1464=	2 1 1	64	4.3850	5.8757=	5 6 3
52	1.8853	2.2997=	2 2 2	65	4.7100	6.3060=	6 2 3
53	2.0078	2.4694=	2 3 7	66	5.0519	6.7484=	6 5 5
54	2.1379	2.6555=	2 4 14	67	5.4014	7.2868=	7 2 0
55	2.2799	2.8581=	2 6 0	68	5.7581	7.9210=	7 6 11
56	2.4335	3.0770=	3 0 13	69	6.1272	8.6511=	8 4 13
						126.0483=	126 0 8

TABLE XXVIII.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	BAKERS.				AGE.	BAKERS.					
	Mortality.	Sickness.				Mortality.	Sickness.				
		Weeks.	W.	D. H.			Weeks.	W.	D. H.		
18	1.4777	.6958=	0	4	21	45	.8287	1.2289=	1	1	14
19	1.3082	.7199=	0	5	1	46	.9417	1.2509=	1	1	18
20	1.4487	.7361=	0	5	4	47	1.0598	1.3220=	1	2	6
21	.9997	.7924=	0	5	13	48	1.1830	1.4422=	1	3	2
22	.8256	.8290=	0	5	19	49	1.3114	1.6115=	1	4	7
23	.6865	.8737=	0	6	3	50	1.4448	1.8899=	1	6	5
24	.6123	.8672=	0	6	2	51	1.5834	2.0974=	2	0	16
25	.5931	.8688=	0	6	2	52	1.7516	2.3734=	2	2	15
26	.6288	.8586=	0	6	0	53	1.9496	2.6581=	2	4	15
27	.6621	.8503=	0	5	23	54	2.1774	2.9513=	2	6	16
28	.6931	.8436=	0	5	22	55	2.4349	3.2531=	3	1	18
29	.7218	.8386=	0	5	21	56	2.6821	3.5635=	3	3	23
30	.7481	.8354=	0	5	20	57	2.9738	4.0026=	4	0	0
31	.7921	.8338=	0	5	20	58	3.1900	4.5696=	4	4	0
32	.7965	.8246=	0	5	19	59	3.3709	5.2645=	5	1	20
33	.8215	.8078=	0	5	16	60	3.5223	6.0873=	6	0	15
34	.8468	.7832=	0	5	12	61	3.6262	7.0372=	7	0	6
35	.8725	.7511=	0	5	6	62	3.7869	7.8580=	7	6	0
36	.8966	.7113=	0	5	0	63	3.9969	8.5505=	8	6	20
37	.9019	.7015=	0	4	22	64	4.2583	9.1147=	9	0	19
38	.8876	.7219=	0	5	1	65	4.5695	9.5507=	9	3	21
39	.8543	.7723=	0	5	10	66	4.9308	9.8591=	9	6	0
40	.8021	.8528=	0	5	23	67	5.3035	10.1569=	10	1	2
41	.7344	.9635=	0	6	18	68	5.6877	10.4493=	10	3	3
42	.7033	1.0564=	1	0	9	69	6.0826	10.5968=	10	4	4
43	.7086	1.1316=	1	0	22						
44	.7504	1.1891=	1	1	8						
								151.4497=	151	3	2

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	BLACKSMITHS.				BRICKLAYERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.5742	1.0744=	1	0 12	.6259	.6709=	0	4 17
19	.6089	1.0621=	1	0 10	.6378	.6709=	0	4 17
20	.6470	1.0501=	1	0 8	.6564	.6709=	0	4 17
21	.7231	1.0256=	1	0 4	.6933	.6710=	0	4 17
22	.7825	1.0066=	1	0 1	.7129	.6744=	0	4 17
23	.8232	.9932=	0	6 23	.7139	.6812=	0	4 19
24	.8512	.9852=	0	6 21	.6969	.6912=	0	4 20
25	.8605	.9826=	0	6 21	.6618	.7050=	0	4 22
26	.8532	.9856=	0	6 22	.6085	.7219=	0	5 1
27	.8427	.9864=	0	6 22	.5722	.7391=	0	5 4
28	.8253	.9849=	0	6 21	.5530	.7606=	0	5 8
29	.8128	.9812=	0	6 21	.5506	.7744=	0	5 10
30	.7933	.9755=	0	6 20	.5653	.7925=	0	5 13
31	.7707	.9673=	0	6 18	.5971	.8108=	0	5 16
32	.7573	.9654=	0	6 18	.6314	.8370=	0	5 21
33	.7528	.9696=	0	6 19	.6682	.8711=	0	6 2
34	.7776	.9806=	0	6 21	.7074	.9129=	0	6 9
35	.7714	.9974=	1	0 0	.7492	.9626=	0	6 18
36	.7943	1.0208=	1	0 4	.7815	1.0201=	1	0 4
37	.8212	1.0472=	1	0 8	.8275	1.0843=	1	0 14
38	.8523	1.0766=	1	0 13	.8518	1.1550=	1	1 2
39	.8871	1.1051=	1	0 18	.8259	1.2325=	1	1 15
40	.9261	1.1246=	1	0 21	.8700	1.3163=	1	2 5
41	.9691	1.1831=	1	1 7	.8639	1.4068=	1	2 20
42	1.0148	1.2181=	1	1 13	.9033	1.4890=	1	3 10
43	1.0633	1.2494=	1	1 18	.9281	1.5629=	1	3 22
44	1.1145	1.2771=	1	1 22	.9984	1.6285=	1	4 10
45	1.1689	1.3012=	1	2 3	1.0933	1.6858=	1	4 19
46	1.2456	1.3206=	1	2 6	1.2151	1.7348=	1	5 3
47	1.3001	1.3440=	1	2 10	1.3243	1.7878=	1	5 12
48	1.3924	1.4485=	1	3 3	1.4226	1.8447=	1	5 22
49	1.5026	1.5951=	1	4 4	1.5070	1.9056=	1	6 8
50	1.6302	1.7838=	1	5 12	1.5806	1.9704=	1	6 19
51	1.7761	2.0146=	2	0 2	1.6423	2.0391=	2	0 7
52	1.9220	2.3038=	2	2 3	1.7410	2.1287=	2	0 21
53	2.0679	2.5715=	2	4 0	2.1929	2.2392=	2	1 16
54	2.2138	2.8576=	2	6 0	2.3780	2.3704=	2	2 14
55	2.3598	3.1622=	3	1 3	2.2594	2.5227=	2	3 16
56	2.4258	3.4853=	3	3 9	2.5062	2.6955=	2	4 21
57	2.6726	3.7800=	3	5 11	2.7017	2.9133=	2	6 9
58	2.8602	4.0463=	4	0 8	2.8673	3.0309=	3	0 5
59	3.0686	4.2843=	4	2 0	2.9615	3.4811=	3	3 9
60	3.2978	4.4939=	4	3 11	3.0182	3.8317=	3	5 20
61	3.5498	4.6761=	4	4 18	3.0673	4.2265=	4	1 14
62	3.7998	5.0200=	5	0 4	3.0506	4.4204=	4	2 23
63	3.9338	5.5284=	5	3 17	3.0884	4.4133=	4	2 21
64	4.0698	6.2005=	6	1 10	3.1404	4.2051=	4	1 10
65	4.1678	7.0562=	7	0 9	3.2067	3.1961=	3	1 9
66	4.2278	8.0355=	8	0 6	3.2872	3.1858=	3	1 7
67	4.2044	8.7250=	8	5 2	4.2136	3.1311=	3	0 22
68	4.0976	9.1647=	9	1 4	5.9860	3.6320=	3	4 10
69	3.9075	9.1746=	9	1 5	8.6044	4.6884=	4	4 20
		133.6494=	133	4 14			98.7942=	98 5 11

TABLE XXX.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY, DISTRICTS.

AGE.	BUTCHERS.					CABINET MAKERS.				
	Mortality.	Sickness.				Mortality.	Sickness.			
		Weeks.	W.	D.	H.		Weeks.	W.	D.	H.
18	1.0195	.6814=	0	4	18	.5946	.8551=	0	6	0
19	.9456	.6672=	0	4	16	.6108	.8572=	0	6	0
20	.8717	.6530=	0	4	13	.6265	.8593=	0	6	0
21	.7238	.6245=	0	4	9	.6584	.8643=	0	6	1
22	.6319	.5998=	0	4	5	.6832	.8634=	0	6	1
23	.5959	.5787=	0	4	1	.7008	.8568=	0	6	0
24	.6158	.5612=	0	3	22	.7113	.8450=	0	5	22
25	.6916	.5475=	0	3	20	.7146	.8275=	0	5	19
26	.8234	.5374=	0	3	18	.7106	.8044=	0	5	15
27	.9093	.5321=	0	3	17	.7091	.7929=	0	5	13
28	.9493	.5317=	0	3	17	.7098	.7932=	0	5	13
29	.9435	.5361=	0	3	18	.7129	.8051=	0	5	15
30	.8919	.5456=	0	3	20	.7184	.8280=	0	5	19
31	.7943	.5995=	0	4	5	.7262	.8643=	0	6	1
32	.7444	.5724=	0	4	0	.7314	.8966=	0	6	7
33	.7420	.5259=	0	3	16	.7341	.9258=	0	6	12
34	.7873	.5941=	0	4	4	.7342	.9519=	0	6	16
35	.8802	.6030=	0	4	5	.7317	.9749=	0	6	20
36	1.0207	.6101=	0	4	7	.7266	.9945=	0	6	23
37	1.1468	.6273=	0	4	9	.7362	1.0180=	1	0	3
38	1.2585	.6535=	0	4	14	.7607	1.0456=	1	0	8
39	1.3559	.6891=	0	4	20	.7999	1.0611=	1	0	10
40	1.4389	.7340=	0	5	3	.8540	1.1127=	1	0	19
41	1.5075	.7883=	0	5	12	.9228	1.1522=	1	1	2
42	1.5503	.8582=	0	6	0	1.0060	1.1988=	1	1	9
43	1.5671	.9438=	0	6	15	1.0496	1.2526=	1	1	18
44	1.5580	1.0450=	1	0	8	1.1074	1.3136=	1	2	5
45	1.5230	1.1619=	1	1	3	1.1617	1.1818=	1	1	7
46	1.4619	1.2946=	1	2	2	1.2122	1.4571=	1	3	5
47	1.4767	1.3964=	1	2	19	1.2703	1.5342=	1	3	18
48	1.5614	1.4673=	1	3	7	1.3359	1.6131=	1	4	7
49	1.7219	1.5073=	1	3	13	1.4090	1.6935=	1	4	21
50	1.9563	1.5165=	1	3	15	1.4897	1.7758=	1	5	10
51	2.2646	1.4946=	1	3	11	1.5778	1.8597=	1	6	0
52	2.5194	1.5222=	1	3	16	1.6678	1.9712=	1	6	19
53	2.7208	1.5991=	1	4	5	1.7597	2.1122=	2	0	19
54	2.8688	1.7259=	1	5	2	1.8534	2.2767=	2	1	22
55	2.9633	1.9014=	1	6	7	1.9491	2.4788=	2	3	8
56	3.0043	2.1267=	2	0	21	2.0465	2.6923=	2	4	20
57	3.0264	2.4417=	2	3	2	2.1389	3.0154=	3	0	3
58	3.0294	2.8465=	2	5	22	2.3079	3.4399=	3	3	2
59	3.0115	3.3409=	3	2	9	2.3882	3.9660=	3	6	18
60	2.9747	3.9250=	3	6	11	2.5852	4.5937=	4	4	4
61	2.9208	4.5988=	4	4	5	2.7570	5.3228=	5	2	6
62	2.8826	4.9891=	4	6	22	2.9813	5.9408=	5	6	14
63	2.8602	5.0959=	5	0	16	3.2579	6.4475=	6	3	3
64	2.8555	4.5191=	4	3	15	3.5872	6.8429=	6	5	22
65	2.8666	4.4588=	4	3	5	3.9688	7.1272=	7	0	21
66	2.8914	3.7169=	3	5	0	4.4030	7.3001=	7	2	2
67	3.1032	3.2854=	3	2	0	4.6645	7.5122=	7	3	14
68	3.5023	3.1703=	3	1	5	4.7532	7.7633=	7	5	8
69	4.0885	3.3696=	3	2	14	4.6693	8.0536=	8	0	9
		85.9123=	85	6	7		125.5888=	125	4	2

TABLE XXXI.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	CLERKS.				COOPERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.4987	.4205=	0	2 23	.3577	.5499=	0	3 20
19	.5053	.4222=	0	2 23	.3990	.5595=	0	3 22
20	.5141	.4239=	0	2 23	.4400	.5692=	0	4 0
21	.5274	.4273=	0	3 0	.5231	.5885=	0	4 3
22	.5615	.4371=	0	3 2	.6129	.6093=	0	4 6
23	.6142	.4533=	0	3 4	.7100	.6315=	0	4 10
24	.6900	.4759=	0	3 8	.8143	.6551=	0	4 14
25	.7865	.5048=	0	3 13	.9258	.6802=	0	4 18
26	.9038	.5400=	0	3 19	1.0445	.7066=	0	4 23
27	.9958	.5590=	0	3 22	1.1247	.7275=	0	5 2
28	1.0606	.5619=	0	3 22	1.1663	.7429=	0	5 5
29	1.1041	.5485=	0	3 20	1.1693	.7527=	0	5 6
30	1.1204	.5190=	0	3 15	1.1337	.7571=	0	5 7
31	1.1113	.4734=	0	3 8	1.0593	.7559=	0	5 7
32	1.1035	.4422=	0	3 2	1.0397	.7764=	0	5 10
33	1.0967	.4256=	0	2 23	1.0747	.8186=	0	5 18
34	1.0911	.4656=	0	3 6	1.1645	.8825=	0	6 4
35	1.0885	.4322=	0	3 1	1.3089	.9681=	0	6 19
36	1.0832	.4633=	0	3 6	1.5080	1.0754=	1	0 13
37	1.0984	.5074=	0	3 13	1.6675	1.1743=	1	1 5
38	1.1322	.5685=	0	4 0	1.7874	1.2647=	1	1 20
39	1.1847	.6466=	0	4 13	1.8677	1.3467=	1	2 10
40	1.2559	.7417=	0	5 4	1.9085	1.4203=	1	2 23
41	1.3456	.8538=	0	5 23	1.9096	1.4854=	1	3 10
42	1.3969	.9516=	0	6 16	1.9525	1.5440=	1	3 19
43	1.5298	1.0349=	1	0 6	2.0373	1.5961=	1	4 4
44	1.6241	1.1039=	1	0 17	2.1639	1.6418=	1	4 12
45	1.7199	1.1586=	1	1 2	2.3403	1.6810=	1	4 18
46	1.8176	1.1988=	1	1 9	2.5225	1.7137=	1	5 0
47	1.8759	1.2357=	1	1 16	2.6898	1.7542=	1	5 7
48	1.8950	1.2692=	1	1 21	2.7744	1.8024=	1	5 15
49	1.8753	1.2993=	1	2 2	2.7961	1.8587=	1	6 0
50	1.9953	1.3260=	1	2 7	2.7551	1.9223=	1	6 11
51	1.7165	1.3493=	1	2 11	2.6512	1.9945=	1	6 23
52	1.7011	1.4076=	1	2 20	2.9944	2.0376=	2	0 6
53	1.7688	1.5010=	1	3 12	2.9849	2.0550=	2	0 9
54	1.9198	1.6294=	1	4 10	2.6225	2.0437=	2	0 7
55	2.1543	1.7528=	1	5 6	2.7082	2.0037=	2	0 1
56	2.4718	1.9912=	1	6 23	2.8394	1.9378=	1	6 14
57	2.7543	2.4197=	2	2 22	3.0353	1.6215=	1	4 8
58	3.0016	2.6783=	2	4 18	3.2230	2.2558=	2	1 19
59	3.2138	3.9671=	3	6 18	3.4746	2.6407=	2	4 12
60	3.3909	5.0860=	5	0 14	3.7662	3.1762=	3	1 6
61	3.5328	6.4350=	6	3 1	4.0979	3.8623=	3	6 1
62	3.7559	7.4048=	7	2 20	4.3986	4.3018=	4	2 3
63	4.0602	7.9956=	7	6 23	4.6693	4.4547=	4	3 4
64	4.4459	8.2072=	8	1 11	4.9090	4.4610=	4	3 5
65	4.9128	8.0298=	8	0 5	5.1180	4.1407=	4	1 0
66	5.4609	7.4932=	7	3 11	5.2961	3.5938=	3	4 4
67	5.9869	7.1542=	7	1 2	5.5223	3.3203=	3	2 6
68	6.3708	6.9428=	6	6 14	5.7965	3.0469=	3	0 7
69	6.7327	7.0990=	7	0 17	6.1190	2.8341=	2	5 20
		113.4317=	113	2 23		91.7946=	91	5 12

TABLE XXXII.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	DYERS.				LABOURERS.—RURAL.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	1.4791	.8894=	0	6 5	.6829	.8284=	0	5 19
19	1.3834	.8841=	0	6 5	.6717	.8314=	0	5 20
20	1.2876	.8788=	0	6 3	.6605	.8344=	0	5 20
21	1.0963	.8681=	0	6 2	.6381	.8404=	0	5 21
22	.9363	.8529=	0	5 23	.6204	.8452=	0	5 22
23	.8079	.8291=	0	5 19	.6075	.8488=	0	5 23
24	.7311	.8087=	0	5 16	.5993	.8512=	0	5 23
25	.6460	.7797=	0	5 11	.5959	.8523=	0	5 23
26	.6123	.7461=	0	5 5	.5972	.8540=	0	6 0
27	.5938	.7222=	0	5 1	.5969	.8533=	0	5 23
28	.5905	.7079=	0	4 23	.5950	.8562=	0	6 0
29	.6024	.7031=	0	4 22	.5915	.8605=	0	6 1
30	.6295	.7077=	0	4 23	.5865	.8664=	0	6 2
31	.6718	.7217=	0	5 1	.5798	.8738=	0	6 3
32	.7232	.7329=	0	5 3	.5825	.8920=	0	6 6
33	.7838	.7416=	0	5 4	.5946	.9207=	0	6 11
34	.8536	.7477=	0	5 5	.6161	.9606=	0	6 17
35	.9325	.7514=	0	5 6	.6470	1.0110=	1	0 2
36	1.0206	.7527=	0	5 6	.6871	1.0721=	1	0 12
37	1.2694	.7697=	0	5 9	.7185	1.1217=	1	0 20
38	1.6789	.8023=	0	5 15	.7405	1.1598=	1	1 3
39	2.2492	.8507=	0	5 23	.7533	1.1863=	1	1 7
40	2.9803	.9146=	0	6 10	.7569	1.2014=	1	1 10
41	3.8721	.9942=	0	6 23	.7511	1.2049=	1	1 10
42	4.4809	1.0669=	1	0 11	.7527	1.2265=	1	1 14
43	4.6868	1.1326=	1	0 22	.7615	1.2662=	1	1 21
44	4.6093	1.1915=	1	1 8	.7777	1.3240=	1	2 6
45	4.2097	1.2434=	1	1 17	.8011	1.3999=	1	2 19
46	3.4867	1.2884=	1	2 1	.8318	1.4938=	1	3 11
47	2.9204	1.3338=	1	2 8	.8679	1.5997=	1	4 5
48	2.5588	1.3795=	1	2 16	.9093	1.7175=	1	5 1
49	2.3540	1.4256=	1	3 0	.9561	1.8473=	1	5 22
50	2.3219	1.4719=	1	3 7	1.0083	1.9890=	1	6 22
51	2.4625	1.5187=	1	3 15	1.0458	2.1426=	2	1 0
52	2.5382	1.5814=	1	4 2	1.1480	2.2899=	2	2 1
53	2.5491	1.6661=	1	4 16	1.2547	2.4309=	2	3 0
54	2.4950	1.7668=	1	5 9	1.3861	2.5657=	2	3 23
55	2.3761	1.8855=	1	6 5	1.5420	2.6942=	2	4 21
56	2.3924	2.0222=	2	0 4	1.7224	2.8164=	2	5 17
57	2.0723	2.1955=	2	1 9	1.9150	2.9514=	2	6 16
58	2.0960	2.4053=	2	2 20	2.1197	3.0990=	3	0 17
59	2.1035	2.6517=	2	4 13	2.3366	3.2592=	3	1 20
60	2.1748	2.9346=	2	6 13	2.5657	3.4322=	3	3 1
61	2.3098	3.2540=	3	1 19	2.8069	3.6177=	3	4 8
62	2.4558	3.5604=	3	3 22	2.9771	3.8940=	3	6 6
63	2.5326	3.8538=	3	6 0	3.0764	4.2611=	4	1 20
64	2.7004	4.1342=	4	0 23	3.1048	4.7190=	4	5 1
65	2.8792	4.4016=	4	2 19	3.0622	5.2677=	5	1 21
66	3.0688	4.6560=	4	4 14	2.9485	5.9071=	5	6 8
67	3.3924	4.7567=	4	5 7	2.9025	6.5446=	6	3 19
68	3.8500	4.7037=	4	4 22	2.9243	7.1802=	7	1 6
69	4.4415	4.4970=	4	3 11	3.0138	7.8138=	7	5 17
		89.1361=	89	1 0			113.3774=	113 2 17

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	LABOURERS.—TOWN AND CITY.				MINERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.7594	.9038=	0	6 8	.9126	1.0584=	1	0 10
19	.7503	.9031=	0	6 8	.9040	1.0634=	1	0 11
20	.7412	.9029=	0	6 8	.8955	1.0764=	1	0 13
21	.7229	.9024=	0	6 8	.8784	1.0766=	1	0 13
22	.7093	.9026=	0	6 8	.8678	1.0957=	1	0 16
23	.7004	.9035=	0	6 8	.8638	1.1198=	1	0 20
24	.6962	.9050=	0	6 8	.8664	1.1509=	1	1 1
25	.6966	.9072=	0	6 8	.8756	1.1890=	1	1 8
26	.7017	.9101=	0	6 9	.8913	1.2316=	1	1 15
27	.7067	.9136=	0	6 9	.9257	1.2680=	1	1 21
28	.7116	.9175=	0	6 10	.9789	1.2983=	1	2 2
29	.7164	.9218=	0	6 11	1.0508	1.3223=	1	2 6
30	.7211	.9267=	0	6 12	1.1415	1.3402=	1	2 9
31	.7256	.9319=	0	6 13	1.2509	1.3541=	1	2 12
32	.7379	.9453=	0	6 14	1.3270	1.3833=	1	2 16
33	.7580	.9667=	0	6 18	1.3699	1.4278=	1	3 0
34	.7858	.9962=	0	6 23	1.3795	1.4877=	1	3 10
35	.8215	1.0338=	1	0 6	1.3558	1.5630=	1	3 23
36	.8649	1.0794=	1	0 13	1.2988	1.6536=	1	4 14
37	.9140	1.1323=	1	0 22	1.2598	1.7490=	1	5 5
38	.9687	1.1925=	1	1 8	1.2389	1.8493=	1	5 23
39	1.0291	1.2598=	1	1 20	1.2361	1.9543=	1	6 16
40	1.0951	1.3344=	1	2 8	1.2514	1.0602=	1	0 10
41	1.1667	1.4161=	1	2 22	1.2847	2.1788=	2	1 6
42	1.2279	1.4887=	1	3 14	1.3273	2.2918=	2	2 1
43	1.2788	1.5522=	1	3 21	1.3792	2.4033=	2	2 20
44	1.3193	1.6065=	1	4 6	1.4402	2.5133=	2	3 12
45	1.3495	1.6517=	1	4 13	1.5106	2.6217=	2	4 8
46	1.3693	1.6877=	1	4 20	1.5901	2.7285=	2	5 2
47	1.4028	1.7505=	1	5 6	1.6870	2.8451=	2	5 22
48	1.4199	1.8400=	1	5 21	1.8013	2.9716=	2	6 19
49	1.5106	1.9562=	1	6 17	1.9328	3.1078=	3	0 18
50	1.5850	2.0991=	2	0 17	2.0816	3.2538=	3	1 19
51	1.6729	2.2686=	2	1 21	2.2480	3.4047=	3	2 20
52	1.7625	2.4436=	2	3 3	2.3987	3.6135=	3	4 7
53	1.8539	2.6243=	2	4 9	2.5740	3.8651=	3	6 1
54	1.9470	2.8105=	2	5 16	2.6538	4.1647=	4	1 4
55	2.0419	3.0024=	3	0 0	2.7582	4.5123=	4	3 14
56	2.1385	3.1998=	3	1 9	2.8471	4.9077=	4	6 9
57	2.2652	3.4093=	3	2 21	2.9741	5.3271=	5	2 7
58	2.4220	3.6309=	3	4 10	3.1390	5.7705=	5	5 9
59	2.6087	3.8644=	3	6 1	3.3418	6.2379=	6	1 16
60	2.8255	4.1101=	4	0 19	3.5827	6.7293=	6	5 2
61	3.0722	4.3677=	4	2 14	3.8614	7.2447=	7	1 17
62	3.2780	4.7451=	4	5 5	4.1995	7.4532=	7	3 4
63	3.4430	5.2424=	5	1 17	4.5969	8.0748=	8	0 13
64	3.5671	5.8594=	5	6 0	5.0537	8.3896=	8	2 17
65	3.6504	6.1963=	6	1 9	5.5698	8.4374=	8	3 1
66	3.6928	7.4529=	7	3 4	6.1452	8.8183=	8	5 18
67	3.8665	8.3364=	8	2 9	6.7218	9.2704=	9	1 21
68	4.1695	9.2469=	9	1 17	7.2997	9.9937=	9	6 23
69	4.6079	10.1843=	10	1 7	7.8788	10.9881=	10	6 22
		132.7360=	132	5 8		185.8916=	185	6 2

TABLE XXXIV.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	MILL OPERATIVES.					PLUMBERS.				
	Mortality.	Sickness.				Mortality.	Sickness.			
		Weeks.	W.	D.	H.		Weeks.	W.	D.	H.
18	.4318	.7381=	0	5	4	.7511	.6562=	0	4	14
19	.4461	.7345=	0	5	3	.7179	.6651=	0	4	16
20	.4605	.7310=	0	5	3	.6848	.6740=	0	4	17
21	.4892	.7238=	0	5	3	.6185	.6918=	0	4	20
22	.5168	.7155=	0	5	0	.5677	.7101=	0	4	23
23	.5431	.7061=	0	4	23	.5324	.7287=	0	5	2
24	.5687	.6956=	0	4	21	.5126	.7478=	0	5	6
25	.5929	.6840=	0	4	19	.5083	.7872=	0	5	12
26	.6159	.6714=	0	4	17	.5195	.7870=	0	5	12
27	.6367	.6614=	0	4	15	.5447	.8043=	0	5	15
28	.6554	.6140=	0	4	7	.5838	.8189=	0	5	18
29	.6720	.6493=	0	4	13	.6369	.8308=	0	5	20
30	.6865	.6472=	0	4	13	.7040	.8402=	0	5	21
31	.6988	.6478=	0	4	13	.7850	.8469=	0	5	22
32	.7141	.6603=	0	4	15	.8604	.8656=	0	6	1
33	.7325	.6848=	0	4	19	.9302	.8962=	0	6	7
34	.7539	.7214=	0	5	1	.9943	.9387=	0	6	14
35	.7784	.7899=	0	5	13	1.0529	.9932=	0	6	23
36	.8059	.8305=	0	5	20	1.1058	1.0596=	1	0	10
37	.8483	.8832=	0	6	4	1.1661	1.1387=	1	0	23
38	.9057	.9280=	0	6	12	1.2338	1.2306=	1	1	15
39	.9780	.9648=	0	6	18	1.3088	1.3350=	1	2	8
40	1.0652	.9937=	0	6	23	1.3913	1.4523=	1	3	4
41	1.1673	1.0146=	1	0	2	1.4811	1.6623=	1	4	15
42	1.2599	1.0533=	1	0	9	1.6071	1.6838=	1	4	19
43	1.3428	1.1095=	1	0	18	1.7734	1.7569=	1	5	7
44	1.4160	1.1833=	1	1	7	1.9679	1.8018=	1	5	15
45	1.4797	1.2747=	1	1	22	2.2027	1.8183=	1	5	18
46	1.5336	1.3838=	1	2	17	2.4738	1.8061=	1	5	15
47	1.6276	1.5031=	1	3	13	2.6911	1.8109=	1	5	16
48	1.7617	1.6329=	1	4	10	2.8546	1.8307=	1	5	20
49	1.9359	1.7729=	1	5	10	2.9643	1.8714=	1	6	2
50	2.1502	1.9234=	1	6	11	3.0202	1.9270=	1	6	12
51	2.4045	2.0842=	2	0	14	3.0222	1.9998=	2	0	0
52	2.6102	2.2358=	2	1	15	3.0476	2.1096=	2	0	18
53	2.7671	2.3752=	2	2	15	3.0905	2.2562=	2	1	19
54	2.8754	2.5055=	2	3	13	3.1567	2.4398=	2	3	2
55	2.9349	2.7257=	2	5	2	3.2444	2.6603=	2	4	15
56	2.9456	2.7353=	2	5	4	3.3534	2.9177=	2	6	10
57	3.1058	2.8783=	2	6	4	3.4997	3.0579=	3	0	10
58	3.4156	3.0535=	3	0	9	3.6834	3.3809=	3	2	16
59	3.8750	3.2613=	3	1	20	3.9045	3.5466=	3	3	20
60	4.4840	3.5017=	3	3	12	4.1630	3.7350=	3	5	3
61	5.2425	3.7747=	3	5	10	4.4588	3.9462=	3	6	15
62	5.8575	4.0785=	4	0	13	4.8805	4.3317=	4	2	8
63	6.3288	4.4132=	4	2	21	5.4281	4.9315=	4	6	13
64	6.6566	4.7583=	4	5	7	6.1016	5.7455=	5	5	5
65	6.8407	5.1743=	5	1	5	6.9011	6.9539=	6	6	16
66	6.8811	5.6010=	5	4	5	7.8264	8.0167=	8	0	3
67	6.9140	6.4173=	6	2	22	8.5797	9.5193=	9	3	15
68	6.9394	7.6234=	7	4	9	9.1607	11.2818=	11	1	23
69	6.9573	9.1791=	9	1	6	9.5696	13.3043=	13	2	3
		109.3041=	109	2	4		134.6028=	134	4	2

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	POTTERS.				PRINTERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.3447	.8826=	0	6 4	.3610	.9706=	0	6 19
19	.3795	.8261=	0	5 19	.4040	.9516=	0	6 16
20	.4144	.7740=	0	5 10	.4470	.9477=	0	6 15
21	.4841	.6566=	0	4 14	.5330	.9248=	0	6 11
22	.5371	.5777=	0	4 1	.5955	.8957=	0	6 6
23	.5734	.5330=	0	3 18	.6346	.8604=	0	6 1
24	.5930	.5223=	0	3 16	.6502	.8190=	0	5 18
25	.5959	.5457=	0	3 20	.6424	.7714=	0	5 10
26	.5820	.6031=	0	4 5	.6110	.7176=	0	5 1
27	.5871	.6460=	0	4 13	.5774	.6784=	0	4 18
28	.6113	.6744=	0	4 17	.5413	.6138=	0	4 7
29	.6546	.6884=	0	4 20	.5029	.6437=	0	4 12
30	.7170	.6879=	0	4 20	.4622	.6483=	0	4 13
31	.7984	.6730=	0	4 17	.4191	.6674=	0	4 16
32	.9090	.6902=	0	4 20	.4223	.6939=	0	4 21
33	1.0487	.7395=	0	5 4	.4720	.7276=	0	5 2
34	1.2175	.8210=	0	5 18	.5680	.7687=	0	5 9
35	1.4155	.9345=	0	6 13	.7105	.8171=	0	5 17
36	1.6425	1.0801=	1	0 14	.8993	.8728=	0	6 3
37	1.8008	1.2095=	1	1 11	1.0362	.9343=	0	6 13
38	1.8902	1.3225=	1	2 6	1.1209	1.0018=	1	0 0
39	1.9109	1.4192=	1	2 22	1.1536	1.0751=	1	0 13
40	1.8629	1.4997=	1	3 12	1.1343	1.1544=	1	1 2
41	1.7460	1.5639=	1	3 23	1.0627	1.2395=	1	1 16
42	1.6612	1.6429=	1	4 12	1.0277	1.3001=	1	2 2
43	1.6086	1.7368=	1	5 4	1.0293	1.3364=	1	2 8
44	1.5883	1.6455=	1	4 12	1.0674	1.3482=	1	2 10
45	1.6002	1.9690=	1	6 19	1.1421	1.3337=	1	2 8
46	1.6442	2.0977=	2	0 16	1.2534	1.2984=	1	2 2
47	1.7446	1.8085=	1	5 16	1.3338	1.2936=	1	2 1
48	1.9014	1.5025=	1	3 13	1.3835	1.3205=	1	2 6
49	2.1145	1.1494=	1	1 1	1.4023	1.3797=	1	2 18
50	2.3840	.7890=	0	5 13	1.3904	1.4709=	1	3 7
51	3.7097	.7916=	0	5 13	1.3475	1.5940=	1	4 3
52	3.0546	1.2918=	1	2 1	1.4295	1.7624=	1	5 8
53	3.4186	1.6898=	1	4 20	1.6361	1.9761=	1	6 20
54	3.8018	2.5855=	2	4 2	1.9675	2.2349=	2	1 15
55	4.2041	3.3789=	3	2 16	2.4237	2.5390=	2	3 19
56	4.5318	3.8701=	3	6 2	3.0046	2.8883=	2	6 5
57	4.9583	4.3396=	4	2 9	3.6609	3.3082=	3	2 4
58	5.2023	4.7873=	4	5 11	4.3926	3.7866=	3	5 12
59	5.3575	5.2133=	5	1 12	5.1996	4.3356=	4	2 8
60	5.4241	5.6176=	5	4 8	6.0820	4.9511=	4	6 16
61	5.4017	6.0001=	6	0 0	7.0397	5.6333=	5	4 10
62	5.4222	6.6088=	6	4 6	7.7403	6.0804=	6	0 14
63	5.4853	7.4437=	7	3 3	8.1839	6.2926=	6	2 1
64	5.5912	8.5449=	8	3 20	8.3705	6.2697=	6	1 21
65	5.7399	9.7923=	9	5 13	8.1000	6.0119=	6	0 2
66	5.9313	11.3059=	11	2 3	7.9723	5.5190=	5	3 15
67	6.1416	12.4671=	12	3 6	8.4175	5.2034=	5	1 10
68	6.3709	13.2759=	13	1 22	9.6356	5.0651=	5	0 11
69	6.6192	13.7722=	13	5 10	11.6264	5.1041=	5	0 18
		157.6886=	157	4 20		113.0328=	113	0 5

TABLE XXXVI.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	SAWIERS.					SERVANTS.				
	Mortality.	Sickness.				Mortality.	Sickness.			
		Weeks.	W.	D.	H.		Weeks.	W.	D.	H.
18	.3500	.6190=	0	4	8	.3757	.5524=	0	3	21
19	.3875	.6482=	0	4	13	.3943	.5617=	0	3	22
20	.4250	.6775=	0	4	18	.4130	.5310=	0	3	17
21	.5000	.7760=	0	5	10	.4503	.5896=	0	4	3
22	.5533	.7777=	0	5	11	.4792	.6131=	0	4	7
23	.5849	.8025=	0	5	15	.4997	.6415=	0	4	12
24	.5947	.8105=	0	5	16	.5116	.6748=	0	4	17
25	.5829	.8016=	0	5	15	.5151	.7131=	0	5	0
26	.5493	.7758=	0	5	10	.5099	.7563=	0	5	7
27	.5184	.7668=	0	5	9	.5228	.7907=	0	5	13
28	.4904	.7807=	0	5	11	.5538	.8164=	0	5	17
29	.4651	.8114=	0	5	16	.6028	.8333=	0	5	20
30	.4427	.8610=	0	6	1	.6699	.8415=	0	5	21
31	.4230	.9294=	0	6	12	.7551	.8468=	0	5	22
32	.4120	1.0011=	1	0	0	.8443	.8518=	0	5	23
33	.4098	1.0761=	1	0	13	.9375	.8745=	0	6	3
34	.4164	1.1544=	1	1	2	1.0367	.9090=	0	6	9
35	.4318	1.2560=	1	1	19	1.1359	.9551=	0	6	16
36	.4559	1.3208=	1	2	6	1.2411	1.0129=	1	0	2
37	.4934	1.3902=	1	2	18	1.3114	1.0592=	1	0	10
38	.5441	1.4443=	1	3	3	1.3466	1.0939=	1	0	16
39	.6082	1.4430=	1	3	3	1.3469	1.1171=	1	0	20
40	.6856	1.5164=	1	3	15	1.3122	1.1287=	1	0	22
41	.7762	1.5144=	1	3	15	1.2424	1.1288=	1	0	22
42	.8473	1.5299=	1	3	17	1.2002	1.1494=	1	1	1
43	.8990	1.5549=	1	3	21	1.1858	1.1906=	1	1	8
44	.9311	1.3835=	1	2	16	1.9990	1.2524=	1	1	18
45	.9438	1.6215=	1	4	8	1.2400	1.3347=	1	2	8
46	.9368	1.6670=	1	4	16	1.3086	1.4375=	1	3	2
47	.9878	1.7524=	1	5	6	1.3771	1.5611=	1	3	22
48	1.0966	1.8777=	1	6	3	1.4455	1.7055=	1	4	22
49	1.2632	2.0422=	2	0	7	1.5137	1.8707=	1	6	2
50	1.4878	2.2479=	2	1	18	1.5818	2.0568=	2	0	9
51	1.7702	2.4928=	2	3	11	1.6497	2.2636=	2	1	20
52	1.9954	2.8066=	2	5	15	1.7448	2.4589=	2	3	5
53	2.1635	3.1893=	3	1	8	1.8670	2.6425=	2	4	12
54	2.2744	3.6410=	3	4	12	2.0164	2.8146=	2	5	17
55	2.3282	4.1616=	4	1	3	2.1929	2.9751=	2	6	20
56	2.3253	4.7511=	4	5	6	2.3965	3.1240=	3	0	21
57	2.4177	5.3147=	5	2	5	2.6969	3.2646=	3	1	20
58	2.5711	5.8526=	5	5	23	3.0942	3.3970=	3	2	19
59	2.8209	6.3646=	6	2	13	3.5883	3.5211=	3	3	16
60	3.1552	6.8508=	6	5	23	4.1793	3.6370=	3	4	11
61	3.5739	7.3111=	7	2	4	4.8671	3.7445=	3	5	5
62	3.9825	8.1279=	8	0	21	5.4834	3.9044=	3	6	8
63	4.3808	9.3010=	9	2	3	6.0282	4.1118=	4	0	20
64	4.7690	10.8304=	10	5	20	6.5015	4.3818=	4	2	16
65	5.1469	12.7164=	12	5	0	6.9036	4.6989=	4	4	21
66	5.5145	14.9592=	14	6	17	7.2337	5.0687=	5	0	12
67	5.8685	17.1599=	17	1	3	7.4176	5.4791=	5	3	8
68	6.2087	19.2783=	19	1	23	7.4549	5.3300=	5	2	7
69	6.5352	21.3146=	21	2	5	7.3456	5.2214=	5	1	13
		206.0557=	206	0	10		105.4900=	105	3	9

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	SHOEMAKERS.				SPINNERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.7280	.7577=	0	5 7	.4230	.7132=	0	5 0
19	.7125	.7701=	0	5 9	.4661	.7140=	0	5 0
20	.6970	.7824=	0	5 12	.5093	.7149=	0	5 0
21	.6659	.8072=	0	5 16	.5956	.7166=	0	5 0
22	.6474	.8259=	0	5 19	.6458	.7193=	0	5 1
23	.6415	.8386=	0	5 21	.7200	.7228=	0	5 1
24	.6482	.8452=	0	5 22	.7580	.7273=	0	5 2
25	.6674	.8459=	0	5 22	.7800	.7327=	0	5 3
26	.6992	.8404=	0	5 21	.7858	.7388=	0	5 4
27	.7211	.8346=	0	5 20	.7947	.7469=	0	5 5
28	.7329	.8285=	0	5 19	.8068	.7567=	0	5 7
29	.7346	.8220=	0	5 18	.8220	.7683=	0	5 9
30	.7264	.8152=	0	5 17	.8404	.7816=	0	5 11
31	.7059	.8080=	0	5 16	.8619	.7971=	0	5 14
32	.6946	.8080=	0	5 16	.8687	.8172=	0	5 17
33	.6924	.8149=	0	5 17	.8608	.8419=	0	5 21
34	.6994	.8289=	0	5 19	.8381	.8714=	0	6 2
35	.7155	.8499=	0	5 23	.8007	.9056=	0	6 8
36	.7428	.8780=	0	6 4	.7484	.9442=	0	6 15
37	.7787	.9091=	0	6 9	.7431	.9801=	0	6 21
38	.8230	.9431=	0	6 14	.7846	1.0134=	1	0 2
39	.8757	.9802=	0	6 21	.8731	1.0439=	1	0 7
40	.9370	1.0203=	1	0 4	1.0085	1.0718=	1	0 12
41	1.0066	1.0634=	1	0 11	1.1908	1.0969=	1	0 16
42	1.0636	1.1131=	1	0 19	1.3366	1.1366=	1	0 23
43	1.1081	1.1696=	1	1 4	1.4458	1.1909=	1	1 8
44	1.1401	1.2327=	1	1 15	1.5145	1.2598=	1	1 20
45	1.1595	1.3024=	1	2 3	1.5547	1.3433=	1	2 10
46	1.1663	1.3789=	1	2 16	1.5542	1.4414=	1	3 2
47	1.1780	1.4514=	1	3 4	1.5735	1.5528=	1	3 21
48	1.1945	1.5200=	1	3 16	1.6127	1.6776=	1	4 18
49	1.2159	1.5846=	1	4 2	1.6716	1.8158=	1	5 17
50	1.2422	1.6453=	1	4 12	1.7504	1.9673=	1	6 18
51	1.2733	1.7021=	1	4 22	1.8490	2.1322=	2	0 22
52	1.3369	1.8007=	1	5 15	1.9612	2.3056=	2	2 3
53	1.4331	1.9411=	1	6 14	2.0870	2.4873=	2	3 10
54	1.5619	2.1232=	2	0 21	2.2262	2.6774=	2	4 18
55	1.7233	2.3472=	2	2 10	2.3791	2.8760=	2	6 3
56	1.9172	2.6129=	2	4 7	2.5454	3.0828=	3	0 14
57	2.1553	2.8716=	2	6 2	2.6919	3.3457=	3	2 10
58	2.4376	3.1233=	3	0 21	2.8183	3.6647=	3	4 16
59	2.7640	3.3680=	3	2 14	2.9248	4.0399=	4	0 7
60	3.1347	3.6017=	3	4 5	3.0114	4.4711=	4	3 7
61	3.5495	3.8364=	3	5 21	3.0779	4.9585=	4	6 17
62	3.9019	4.0564=	4	0 9	3.2026	5.3508=	5	2 11
63	4.1921	4.2659=	4	1 21	3.3855	5.6479=	5	4 13
64	4.4199	4.4647=	4	3 6	3.6266	5.8498=	5	5 23
65	4.5855	4.6529=	4	4 14	3.9260	5.9567=	5	6 17
66	4.6887	4.8307=	4	5 20	4.2835	5.9684=	5	6 19
67	4.8831	5.1893=	5	1 8	4.6697	6.0601=	6	0 10
68	5.1688	5.7289=	5	5 2	5.0843	6.2318=	6	1 15
69	5.5457	6.4493=	6	3 3	5.5235	6.4834=	6	3 9
		101.8818=	101	6 7		116.9122=	116	6 7

TABLE XXXVIII.

81

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	STONEMASONS.				TAILORS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.9412	.5531=	0	3 21	.8807	.8473=	0	5 22
19	.9275	.5746=	0	4 1	.8949	.8450=	0	5 22
20	.9139	.5982=	0	4 5	.9092	.8428=	0	5 22
21	.8865	.6353=	0	4 11	.9377	.8381=	0	5 21
22	.8648	.6827=	0	4 19	.9591	.8376=	0	5 21
23	.8488	.7264=	0	5 1	.9731	.8410=	0	5 21
24	.8384	.7705=	0	5 9	.9799	.8484=	0	5 23
25	.8338	.8148=	0	5 17	.9795	.8598=	0	6 0
26	.8349	.8594=	0	6 0	.9716	.8772=	0	6 3
27	.8160	.8887=	0	6 5	.9652	.8865=	0	6 5
28	.7769	.8822=	0	6 4	.9601	.8937=	0	6 6
29	.7176	.9012=	0	6 7	.9563	.8968=	0	6 7
30	.6383	.8845=	0	6 5	.9539	.8959=	0	6 7
31	.5386	.8523=	0	5 23	.9530	.8907=	0	6 6
32	.5120	.8478=	0	5 22	.9461	.8922=	0	6 6
33	.5585	.8709=	0	6 2	.9334	.9004=	0	6 7
34	.6781	.9216=	0	6 11	.9149	.9153=	0	6 10
35	.8709	.9999=	1	0 0	.8906	.9169=	0	6 10
36	1.1368	1.1058=	1	0 18	.8604	.9652=	0	6 18
37	1.3682	1.2122=	1	1 12	.8515	.9936=	0	6 23
38	1.5651	1.3243=	1	2 6	.8639	1.0221=	1	0 4
39	1.7276	1.4290=	1	3 0	.8976	1.0505=	1	0 8
40	1.8556	1.5385=	1	3 19	.9526	1.0791=	1	0 13
41	1.9491	1.6489=	1	4 13	1.0289	1.1076=	1	0 18
42	2.0813	1.7652=	1	5 9	1.0981	1.1376=	1	0 23
43	2.2521	1.8874=	1	6 5	1.1602	1.1591=	1	1 3
44	2.4616	2.0116=	2	0 2	1.2152	1.1901=	1	1 8
45	2.7097	2.1497=	2	1 1	1.2631	1.2164=	1	1 12
46	2.9964	2.2897=	2	2 1	1.3038	1.2402=	1	1 16
47	3.2142	2.4821=	2	3 9	1.3611	1.2932=	1	2 1
48	3.3629	2.7270=	2	5 2	1.4351	1.3694=	1	2 14
49	3.4427	3.0244=	3	0 4	1.5256	1.4709=	1	3 7
50	3.4536	3.3743=	3	2 15	1.6330	1.5977=	1	4 4
51	3.3953	3.7786=	3	5 11	1.7569	1.7497=	1	5 6
52	3.4321	4.0717=	4	0 12	1.9312	1.9428=	1	6 14
53	3.5639	4.2596=	4	1 20	2.1559	2.1771=	2	1 6
54	3.7908	4.3404=	4	2 9	2.4311	2.4525=	2	3 4
55	4.1128	4.3141=	4	2 5	2.7567	2.7691=	2	5 9
56	4.5299	4.1806=	4	1 6	3.1327	3.1268=	3	0 21
57	4.9024	4.2062=	4	1 10	3.4430	3.4383=	3	3 2
58	5.2303	4.3908=	4	2 18	3.6877	3.7036=	3	4 22
59	5.5135	4.7351=	4	5 4	3.8668	3.9226=	3	6 11
60	5.7522	5.2372=	5	1 16	3.9803	4.0954=	4	0 16
61	5.9462	5.8989=	5	6 7	4.0281	4.2222=	4	1 13
62	6.2011	6.4377=	6	3 2	4.3137	4.3880=	4	2 17
63	6.5166	6.8537=	6	5 23	4.8372	4.5931=	4	4 4
64	6.8929	7.1469=	7	1 1	5.5986	4.8975=	4	6 7
65	7.3300	7.3173=	7	2 5	6.5979	5.1212=	5	0 20
66	7.8277	7.3644=	7	2 12	7.8350	5.4440=	5	3 3
67	8.1016	7.6477=	7	4 13	8.5335	5.8295=	5	5 20
68	8.1516	8.1660=	8	1 4	8.6935	6.2778=	6	1 23
69	7.9777	8.7197=	8	5 1	8.3148	6.7889=	6	5 13
		153.3008=	153	2 2			110.5584=	110 3 22

TABLE XXXIX.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN AND CITY DISTRICTS.

AGE.	WATERMEN.				WEAVERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	1.7693	.9519=	0	6 16	1.1978	.6534=	0	4 14
19	1.6818	.9324=	0	6 13	1.1549	.6786=	0	4 18
20	1.5942	.9130=	0	6 9	1.1120	.6938=	0	4 20
21	1.4192	.8740=	0	6 3	1.0263	.7542=	0	5 7
22	1.3008	.8461=	0	5 22	.9436	.7644=	0	5 8
23	1.2392	.8285=	0	5 19	.8640	.7844=	0	5 12
24	1.2343	.8219=	0	5 18	.7876	.7942=	0	5 13
25	1.2862	.8263=	0	5 19	.7143	.7936=	0	5 14
26	1.3948	.8410=	0	5 21	.6441	.7829=	0	5 12
27	1.4893	.8660=	0	6 1	.5961	.7788=	0	5 11
28	1.5697	.9015=	0	6 7	.5705	.7894=	0	5 13
29	1.6360	.9430=	0	6 14	.5671	.7907=	0	5 13
30	1.6882	1.0027=	1	0 0	.5860	.8066=	0	5 15
31	1.7263	1.0701=	1	0 12	.6271	.8293=	0	5 20
32	1.7376	1.1231=	1	0 21	.6704	.8707=	0	6 2
33	1.7223	1.1663=	1	1 4	.7159	.8768=	0	6 3
34	1.6802	1.1983=	1	1 9	.7634	.9016=	0	6 7
35	1.6115	1.2190=	1	1 13	.8131	.9271=	0	6 12
36	1.5159	1.2284=	1	1 14	.8649	.9534=	0	6 16
37	1.4630	1.2442=	1	1 17	.9274	.9859=	0	6 22
38	1.4526	1.2668=	1	1 21	1.0005	1.0245=	1	0 4
39	1.4849	1.2949=	1	2 2	1.0843	1.0694=	1	0 8
40	1.5598	1.3298=	1	2 7	1.1787	1.1204=	1	0 20
41	1.6773	1.3710=	1	2 14	1.2837	1.1776=	1	1 6
42	1.7648	1.4160=	1	2 22	1.3646	1.2331=	1	1 15
43	1.8221	1.4646=	1	3 6	1.4215	1.2869=	1	2 0
44	1.8492	1.5170=	1	3 15	1.4542	1.3391=	1	2 9
45	1.8462	1.5732=	1	4 0	1.4628	1.3897=	1	2 17
46	1.8131	1.6330=	1	4 10	1.4472	1.4385=	1	3 2
47	1.9858	1.6763=	1	4 18	1.4586	1.5113=	1	3 14
48	1.7644	1.7033=	1	4 22	1.4969	1.6094=	1	4 6
49	1.7490	1.7138=	1	5 0	1.5622	1.7715=	1	5 10
50	1.7395	1.7080=	1	4 23	1.6545	1.8779=	1	6 3
51	1.7358	1.6856=	1	4 19	1.7737	2.0309=	2	0 5
52	1.7776	1.6651=	1	4 16	1.8876	2.2179=	2	1 13
53	1.8648	1.6459=	1	4 12	1.9960	2.3852=	2	2 17
54	1.9973	1.6280=	1	4 9	2.0991	2.5507=	2	3 21
55	2.1753	1.6117=	1	4 7	2.1969	2.7143=	2	5 0
56	2.3987	1.5966=	1	4 4	2.2890	2.8760=	2	6 3
57	2.5944	1.7751=	1	5 10	2.3844	3.0641=	3	0 11
58	2.7625	2.1472=	2	1 1	2.4825	3.2785=	3	1 23
59	2.9029	2.7129=	2	5 0	2.5835	3.7192=	3	5 1
60	3.0157	3.4722=	3	3 7	2.6874	3.7863=	3	5 12
61	3.1008	4.4251=	4	2 23	2.7942	4.0800=	4	0 13
62	3.2240	5.2946=	5	2 2	3.0779	4.4104=	4	2 21
63	3.3855	6.0747=	6	0 12	3.5385	4.7787=	4	5 11
64	3.5851	6.7713=	6	5 10	4.1760	5.1846=	5	1 7
65	3.8230	7.5826=	7	4 2	4.9904	5.6277=	5	4 9
66	4.0990	7.9084=	7	6 9	5.9817	6.1087=	6	0 18
67	4.4194	8.3077=	8	2 4	6.4983	6.7081=	6	4 23
68	4.7843	8.5806=	8	4 2	6.5402	7.4261=	7	3 0
69	5.1936	8.7271=	8	5 2	6.1074	8.2628=	8	1 20
		123.0778=	123	0 11		115.2693=	115	1 18

TABLE XL.

ADJUSTED RATE OF MORTALITY AND AVERAGE RATE OF SICKNESS EXPERIENCED BY MEMBERS
OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

AGE.	WHEELWRIGHTS.				WOOLCOMBERS.			
	Mortality.	Sickness.			Mortality.	Sickness.		
		Weeks.	W.	D. H.		Weeks.	W.	D. H.
18	.8866	1.0219=	1	0 4	.3696	.8227=	0	5 19
19	.8648	.9993=	1	0 0	.4169	.8134=	0	5 17
20	.8430	.9768=	0	6 20	.4643	.8041=	0	5 15
21	.7994	.9316=	0	6 13	.5589	.7854=	0	5 12
22	.7660	.8958=	0	6 5	.6218	.7659=	0	5 9
23	.7430	.8693=	0	6 2	.6528	.7455=	0	5 5
24	.7302	.8522=	0	5 23	.6519	.7243=	0	5 2
25	.7277	.8444=	0	5 22	.6191	.7022=	0	4 22
26	.7355	.8460=	0	5 22	.5546	.6792=	0	4 18
27	.7369	.8425=	0	5 21	.5425	.6738=	0	4 17
28	.7320	.8520=	0	5 23	.5829	.6860=	0	4 19
29	.7207	.8205=	0	5 18	.6758	.7158=	0	5 0
30	.7031	.8018=	0	5 15	.8213	.7634=	0	5 8
31	.6790	.7782=	0	5 11	1.0192	.8228=	0	5 18
32	.6631	.7611=	0	5 8	1.9808	.8885=	0	6 5
33	.6554	.7508=	0	5 6	1.9062	.9422=	0	6 14
34	.6557	.7471=	0	5 5	2.5954	.9905=	0	6 22
35	.6642	.7501=	0	5 6	3.4484	1.0327=	1	0 5
36	.6808	.7598=	0	5 8	4.4651	1.0689=	1	0 12
37	.7193	.7569=	0	5 7	5.0533	1.0922=	1	0 16
38	.7798	.8016=	0	5 15	5.2130	1.1026=	1	0 17
39	.8621	.8377=	0	5 21	4.9442	1.1002=	1	0 17
40	.9664	.8733=	0	6 3	4.2469	1.0849=	1	0 14
41	1.0925	.9204=	0	6 11	3.1210	1.0567=	1	0 10
42	1.1901	.9676=	0	6 18	2.2302	1.0740=	1	0 12
43	1.2590	1.0151=	1	0 3	1.5747	1.1368=	1	0 23
44	1.2994	1.4627=	1	3 6	1.1543	1.0451=	1	0 8
45	1.3113	1.1106=	1	0 19	.9692	1.3990=	1	2 19
46	1.2944	1.1546=	1	1 2	1.0192	1.5984=	1	4 4
47	1.2939	1.2009=	1	1 10	1.0713	1.7675=	1	5 9
48	1.3099	1.2376=	1	1 16	1.1254	1.9071=	1	6 8
49	1.3423	1.2687=	1	1 21	1.1816	2.0173=	2	0 3
50	1.3911	1.2942=	1	2 1	1.2398	2.0980=	2	0 16
51	1.4564	1.3140=	1	2 5	1.3000	2.1500=	2	1 1
52	1.5428	1.3688=	1	2 14	1.4082	2.2418=	2	1 17
53	1.6501	1.6586=	1	4 15	1.5643	2.3725=	2	2 15
54	1.7785	2.1833=	2	1 7	1.7683	2.5421=	2	3 19
55	1.9279	2.3431=	2	2 9	2.0203	2.7505=	2	5 6
56	2.0862	2.5378=	2	3 18	2.3201	2.9972=	2	6 23
57	2.3420	2.7390=	2	5 4	2.6066	3.2946=	3	2 2
58	2.6594	2.5466=	2	3 20	2.8798	3.6427=	3	4 12
59	3.0502	2.5606=	2	3 22	3.1398	4.0417=	4	0 7
60	3.5146	2.7811=	2	5 11	3.3866	4.4916=	4	3 10
61	4.0524	3.0089=	3	0 2	3.6201	4.9721=	4	6 19
62	4.4376	3.1780=	3	1 6	3.8365	5.3232=	5	2 6
63	4.6701	3.2895=	3	2 1	4.0358	5.4914=	5	3 10
64	4.7499	3.3434=	3	2 10	4.2180	5.4903=	5	3 10
65	4.6771	3.3397=	3	2 9	4.3832	5.3219=	5	2 6
66	4.4514	3.2772=	3	1 23	4.5313	4.9864=	4	6 22
67	4.4207	3.3402=	3	2 9	4.7066	4.8567=	4	6 0
68	4.5848	3.5277=	3	3 17	4.9093	4.9330=	4	6 13
69	4.9439	3.8397=	3	5 21	5.1392	5.2152=	5	1 12
		83.1803=	83	1 8			112.0220=	112 0 1

SICKNESS DURING PERIODS OF TIME.

It being customary with the majority of lodges in the Manchester Unity to allow certain benefits for a certain period of time, and at the termination of such period to make a reduction in the sick allowance, some adopting one, others another period of time, it was considered advisable, in analysing the returns, to keep the sickness experienced in the first, second, third, and fourth six months, and the sickness after that time, separate and distinct, for the purpose of preparing tables of payment for those who, of their own choice, adopt this principle.

It is well known that many who are well-wishers to the Unity, and other friendly societies, very much condemn this principle of reduction of benefits at a time when the full sick allowance would be most useful to the member. But if a person is desirous of contracting for a sick allowance during life, or in place of sick allowance during life, a sick allowance to age 70, and an annuity after that time, the contribution must be raised to such an amount as many members would not willingly pay, but would decline to insure for relief during sickness. It is therefore preferable that they should insure against sickness even for a limited period, rather than take no care for the future.

Again, members of friendly societies have power to form their own rules, and certainly they have or should have power within themselves, to say whether they will pay a certain sum and received limited benefits, or a higher rate for increased sick allowance, either in amount or unrestricted by time. It is very desirable that societies should have proper tables of payments duly certified, and should allow persons on joining to contract for either benefits, as in neither case with proper tables would the society be a loser.

Objections have been raised against a sick allowance during life, on account of extensive data not having been hitherto obtained, whereon calculations sufficiently reliable could be made as to justify an actuary in certifying the tables. There is no doubt that for isolated societies, wherein full sick allowance is paid for life, there is not absolute safety in any tables calculated on the experience hitherto obtained, unless there is a sufficient number of members in such society as to realise average results.

In analysing these returns it was seen that for the first six months the sickness was constant and regular, even with a small number of lives; in the next six months it became more fluctuating; and the more the period was extended the greater was the fluctuation. When the sickness after two years was taken, it was seen that in many instances a large quantity of the lives extracted, presented no sickness, and in other instances many cases arose together. If reference be made to Table XLI., giving the average sickness experienced, it will be seen how regular the increase takes place with a large number of lives. With a small number it is irregular and fluctuating, and does not give a proper average.

There is no doubt but that affiliated societies, similar to the Manchester Unity, are in a position, and might with safety use tables for payment of sick allowance during life by adopting a rule to the effect, that all benefits during the first twelve months should be paid by the lodge or branch, as a kind of test of the person's sickness. In the Manchester Unity, and many other similar societies, a number of branches join themselves together, for the purpose of forming a society for the payment of an assurance at the death of any member. After the twelve months' sickness, all the future sick benefits should be paid out of this general fund, to which each branch contributes, and this increase of

members would give a sufficient base to enable the society to pay sick benefits during the whole of life.

For their greater protection—in fact, one of the greatest protections friendly societies can have—a valuation should be made of their assets and liabilities, at the termination of every five years. Should either loss or profit then appear, the payments can be so regulated as to prevent any member suffering an injustice.

If the following table be noticed, it will be seen, the same law is observable in the first six and twelve months as appears when all the sickness is combined, viz., a decrease in the average rate of sickness for a number of years, and from that time an increased sickness to the end of the table. In the third six and second twelve months, although the average sickness is not very great for these limited periods of time, yet there is an increased rate for every year of life.

In the early ages in the table, it will be observed how very small the sickness is after the first two years, and how rapidly it accelerates until it far exceeds the average sickness experienced the first two years.

Table XLII. gives the present value of a sick gift for the first six months, the second six months, and for any sickness after the first twelve months.

Table XLIII. gives the present value of a sick gift for the first twelve months, the second twelve months, and for any sickness after two years.

Table XLIV. gives the present value of a sick gift for the third and fourth six months, and after eighteen months' sickness. From these tables, have been obtained the annual premiums, payable for life, given in Table XLIV.

To ascertain the annual premium, payable quarterly during life for a sick benefit, for the second six months, and for the fourth six months, the followed method may be adopted. In the first instance, by subtracting the annual premium payable for the first six months from the annual premium payable for the first twelve months, the annual premium for the second six months is obtained. In the second instance, by subtracting the annual premium payable for the third six months from the annual premium payable for the second twelve months' sickness, is obtained the annual premium payable for the fourth six months.

If it be desired to ascertain the annual premium payable for any sick gift after the first eighteen months' sickness, the same may be obtained by deducting the annual premium payable for the third six months from the annual premium payable during the second twelve months, and adding the difference to the annual premium payable after two years, as in the following example:—

Age 18, annual premium for second twelve months,	.1448
„ „ „ third six months, ...	.0855
„ „ „ fourth six months, ...	.0593
„ „ „ after two years, ...	.3878
„ „ „ eighteen months, ...	.4471

The annual premium is here calculated and given for a payment of £1 per week during sickness. If the annual payment for any other benefit be required, it will be in proportion; for instance, if for ten shillings per week, half the premium; if for five shillings per week one-fourth the premium would be payable.

TABLE XLI.

AVERAGE AMOUNT OF SICKNESS EXPERIENCED FOR ANY OF THE FOLLOWING PERIODS, FROM THE RETURNS OF THE MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	First Six Months.	First Twelve Months.	Third Six Months.	Second Twelve Months.	After Two Years.	Age.	First Six Months.	First Twelve Months.	Third Six Months.	Second Twelve Months.	After Two Years.
18	.7902	.8195	.0029	.0032	.0038	50	1.2049	1.3840	.0885	.1471	.3150
19	.7851	.8165	.0042	.0058	.0040	51	1.2838	1.4595	.0922	.1628	.3418
20	.7800	.8135	.0054	.0091	.0034	52	1.3246	1.5388	.1100	.1826	.3791
21	.7698	.8079	.0067	.0128	.0046	53	1.3874	1.6218	.1239	.2065	.4267
22	.7596	.8013	.0114	.0159	.0068	54	1.4521	1.7086	.1400	.2346	.4846
23	.7498	.7947	.0135	.0187	.0100	55	1.5187	1.7991	.1581	.2668	.5530
24	.7401	.7879	.0153	.0210	.0129	56	1.5872	1.8933	.1784	.3031	.6319
25	.7307	.7807	.0169	.0229	.0162	57	1.6635	1.9603	.2001	.3427	.7700
26	.7217	.7733	.0183	.0243	.0197	58	1.7676	2.1100	.2232	.3862	.8567
27	.7150	.7684	.0196	.0259	.0235	59	1.8394	2.2526	.2477	.4330	.9825
28	.7108	.7663	.0204	.0278	.0271	60	1.9391	2.3981	.2777	.4832	1.1432
29	.7091	.7667	.0218	.0299	.0307	61	2.0465	2.5565	.3010	.5368	1.3107
30	.7098	.7698	.0227	.0323	.0346	62	2.1523	2.7157	.3230	.5886	1.5107
31	.7132	.7755	.0234	.0347	.0386	63	2.2565	2.8701	.3574	.6386	1.7430
32	.7183	.7837	.0240	.0376	.0446	64	2.3591	3.0256	.3864	.6867	2.0016
33	.7254	.7933	.0245	.0408	.0638	65	2.4601	3.1802	.4160	.7530	2.2688
34	.7343	.8054	.0248	.0445	.0649	66	2.5595	3.3339	.4461	.7774	2.6039
35	.7452	.8196	.0250	.0485	.0786	67	2.6736	3.5185	.4921	.8534	2.9729
36	.7579	.8359	.0255	.0528	.0947	68	2.8024	3.7192	.5542	.9611	3.3954
37	.7729	.8542	.0263	.0576	.1100	69	2.9858	3.9508	.6322	1.1003	3.8697
38	.7903	.8741	.0289	.0627	.1252	70	3.1039	4.2084	.7262	1.2710	4.3978
39	.8079	.8972	.0327	.0683	.1385	71	3.2766	4.4920	.8362	1.4776	4.9771
40	.8319	.9219	.0379	.0742	.1519	72	3.4229	4.7408	.9357	1.6553	5.5882
41	.8561	.9506	.0443	.0805	.1622	73	3.5429	4.9549	1.0243	1.8160	6.2189
42	.8828	.9848	.0499	.0864	.1712	74	3.6366	5.1342	1.1023	1.9559	6.8752
43	.9120	1.0185	.0547	.0920	.1846	75	3.7039	5.2788	1.1698	2.0750	7.5550
44	.9436	1.0577	.0587	.0972	.1963	76	3.7447	5.3886	1.2265	2.1731	8.2566
45	.9776	1.1005	.0620	.1021	.2084	77	3.7532	5.4487	1.2712	2.2593	8.9832
46	1.0141	1.1387	.0643	.1066	.2307	78	3.7296	5.4589	1.3037	2.3348	9.5342
47	1.0551	1.1951	.0682	.1133	.2437	79	3.6736	5.4195	1.3240	2.3985	10.5094
48	1.1005	1.2518	.0735	.1223	.2650	80	3.5853	5.3302	1.3323	2.4507	11.3098
49	1.1504	1.3148	.0803	.1336	.2887						

TABLE XLII.

PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK FOR LIFE, DURING THE FIRST SIX MONTHS' SICKNESS; THE PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK FOR THE SECOND SIX MONTHS SICKNESS AFTER A CONTINUOUS SICKNESS OF SIX MONTHS; AND THE PRESENT VALUE OF A SICK GIFT AFTER THESE TWO PERIODS FOR SO LONG AS THE PERSON REMAINS SICK.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.—INTEREST, THREE PER CENT.

AGE.	FIRST SIX MONTHS.				SECOND TWELVE MONTHS.				AFTER EIGHTEEN MONTHS.			
	Present Value.				Present Value.				Present Value.			
	£	s.	d.		£	s.	d.		£	s.	d.	
18	23.1569=	23	3	1	3.2766=	3	5	6	13.2894=	13	5	9
19	23.2453=	23	4	11	3.3805=	3	7	7	13.7950=	13	15	11
20	23.3397=	23	6	9	3.4856=	3	9	8	14.3254=	14	6	6
21	23.4943=	23	9	11	3.6007=	3	12	0	14.9021=	14	18	0
22	23.6059=	23	12	1	3.7062=	3	14	1	15.4581=	15	9	0
23	23.7272=	23	14	6	3.8114=	3	16	3	16.0270=	16	0	6
24	23.8597=	23	17	2	3.9166=	3	18	4	16.6089=	16	12	2
25	24.0041=	24	0	1	4.0225=	4	0	5	17.2051=	17	4	1
26	24.1619=	24	3	3	4.1302=	4	2	7	17.8178=	17	16	4
27	24.3570=	24	7	2	4.2170=	4	4	4	18.4484=	18	8	11
28	24.5443=	24	10	11	4.3277=	4	6	7	19.0976=	19	1	11
29	24.7442=	24	14	11	4.3733=	4	7	6	19.8346=	19	16	8
30	24.9539=	24	19	2	4.4848=	4	9	8	20.5284=	20	10	7
31	25.2069=	25	4	2	4.6054=	4	12	1	21.2879=	21	5	9
32	25.4111=	25	8	3	4.7186=	4	14	4	22.0547=	22	1	1
33	25.6518=	25	13	0	4.8393=	4	16	9	22.7497=	22	14	11
34	25.9013=	25	18	0	4.9609=	4	19	3	23.5298=	23	10	7
35	26.1593=	26	3	2	5.0913=	5	1	10	24.2370=	24	4	9
36	26.4256=	26	8	6	5.2223=	5	4	5	25.0658=	25	1	4
37	26.7004=	26	14	0	5.3581=	5	7	2	25.9163=	25	18	4
38	26.9800=	26	19	7	5.4992=	5	10	0	26.7902=	26	15	9
39	27.2631=	27	5	3	5.6443=	5	12	11	27.5897=	27	11	9
40	27.5496=	27	11	0	5.6909=	5	13	10	28.7162=	28	14	4
41	27.8321=	27	16	8	5.7147=	5	14	4	29.8012=	29	16	0
42	28.1099=	28	2	2	5.8631=	5	17	3	30.8142=	30	16	3
43	28.3757=	28	7	6	6.0116=	6	0	3	31.8423=	31	16	10
44	28.6421=	28	12	10	6.1650=	6	3	4	32.9168=	32	18	4
45	28.8999=	28	18	0	6.3207=	6	6	5	34.0340=	34	0	8
46	29.2166=	29	4	4	6.4931=	6	9	10	35.2825=	35	5	8
47	29.3918=	29	7	10	6.6449=	6	12	11	36.2476=	36	4	11
48	29.6208=	29	12	5	6.7983=	6	16	0	37.5245=	37	10	6
49	29.8350=	29	16	8	6.9733=	6	19	6	38.8328=	38	16	8
50	30.0299=	30	0	7	7.1387=	7	2	9	40.2075=	40	4	2
51	30.2034=	30	4	1	7.3021=	7	6	1	41.6401=	41	12	9
52	30.3372=	30	6	9	7.4858=	7	9	9	43.1453=	43	2	11
53	30.4634=	30	9	3	7.6430=	7	12	10	44.7013=	44	14	0
54	30.4989=	30	10	0	7.8193=	7	16	5	46.2622=	46	5	3
55	30.6031=	30	12	1	7.9825=	7	19	8	47.9740=	47	19	6
56	30.6455=	30	12	11	8.1275=	8	2	7	49.6774=	49	13	6
57	30.6887=	30	13	9	8.2749=	8	5	5	51.4701=	51	9	5
58	30.6539=	30	13	1	8.4404=	8	8	10	53.1786=	53	3	7
59	30.5479=	30	10	11	8.6827=	8	13	8	55.0431=	55	0	10
60	30.5124=	30	10	3	8.8057=	8	16	1	57.0177=	57	0	4
61	30.2961=	30	5	11	9.0485=	9	1	0	58.9977=	59	0	0
62	30.1815=	30	3	8	9.1415=	9	2	10	61.0578=	61	1	2
63	30.0244=	30	0	6	9.2091=	9	4	2	63.1501=	63	3	0
64	29.8328=	29	16	8	9.2557=	9	5	1	65.2888=	65	5	9
65	29.6096=	29	12	2	9.1908=	9	3	10	67.5567=	67	11	2
66	29.3566=	29	7	4	9.1839=	9	3	8	69.9954=	70	0	0
67	29.0809=	29	1	7	9.2406=	9	4	10	72.1728=	72	3	5
68	28.7563=	28	15	4	9.1746=	9	3	6	74.4327=	74	8	8
69	28.3720=	28	7	5	9.3193=	9	6	5	75.3515=	75	7	0

PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK DURING LIFE, FOR THE FIRST TWELVE MONTHS' SICKNESS; PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK FOR THE SECOND TWELVE MONTHS AFTER A CONTINUOUS SICKNESS OF TWELVE MONTHS; AND THE PRESENT VALUE OF A SICK GIFT AFTER THESE TWO PERIODS OF CONTINUOUS SICKNESS.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.—INTEREST THREE PER CENT

AGE.	FIRST TWELVE MONTHS.				FOURTH SIX MONTHS.				AFTER TWO YEARS.			
	Present Value.				Present Value.				Present Value.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	26.4335=	26	8	8	3.2713=	3	5	5	10.0181=	10	0	4
19	26.6258=	26	12	6	3.3956=	3	7	11	10.3994=	10	8	0
20	26.8253=	26	16	6	3.5218=	3	10	5	10.8036=	10	16	1
21	27.0950=	27	1	11	3.6575=	3	13	2	11.2446=	11	4	11
22	27.3121=	27	6	3	3.7853=	3	15	8	11.6728=	11	13	5
23	27.5386=	27	10	9	3.9141=	3	18	3	12.1129=	12	2	3
24	27.7763=	27	15	6	4.0443=	4	0	10	12.5646=	12	11	3
25	28.0266=	28	0	6	4.1766=	4	3	6	13.0285=	13	0	7
26	28.2921=	28	5	10	4.3118=	4	6	3	13.5060=	13	10	1
27	28.5740=	28	11	6	4.4503=	4	9	0	13.9981=	13	19	11
28	28.8720=	28	17	5	4.5927=	4	11	10	14.5049=	14	10	1
29	29.1205=	29	2	5	4.7387=	4	14	9	15.0929=	15	1	10
30	29.4417=	29	8	11	4.8887=	4	17	9	15.6397=	15	12	9
31	29.8123=	29	16	3	5.0481=	5	1	0	16.2198=	16	4	5
32	30.1297=	30	2	7	5.2007=	5	4	0	16.7842=	16	15	8
33	30.4911=	30	9	10	5.3631=	5	7	3	17.3866=	17	7	9
34	30.8652=	30	17	4	5.5300=	5	10	7	17.9968=	17	19	11
35	31.2506=	31	5	0	5.7096=	5	14	2	18.5274=	18	10	7
36	31.6479=	31	12	11	5.8860=	5	17	9	19.1798=	19	3	7
37	32.0585=	32	1	8	6.0676=	6	1	4	19.8487=	19	17	0
38	32.4792=	32	9	7	6.2540=	6	5	1	20.5362=	20	10	9
39	32.9074=	32	18	2	6.4400=	6	8	10	21.2497=	21	5	0
40	33.3405=	33	6	9	6.6349=	6	12	8	21.9813=	21	19	7
41	33.5468=	33	10	11	6.8339=	6	16	8	22.9673=	22	19	4
42	33.9730=	33	19	5	7.0369=	7	0	9	23.7773=	23	15	6
43	34.3873=	34	7	9	7.2602=	7	5	2	24.5821=	24	11	8
44	34.8071=	34	16	2	7.4751=	7	9	6	25.4417=	25	8	10
45	35.2206=	35	4	5	7.6974=	7	13	11	26.3366=	26	6	9
46	35.7097=	35	14	2	7.9471=	7	18	11	27.3354=	27	6	8
47	36.0367=	36	0	9	8.1706=	8	3	5	28.0770=	28	1	6
48	36.4291=	36	8	7	8.4219=	8	8	5	29.1126=	29	2	3
49	36.8083=	36	16	2	8.6898=	8	13	10	30.1430=	30	2	10
50	37.1686=	37	3	4	8.9572=	8	19	2	31.2503=	31	5	0
51	37.5055=	37	10	1	9.2309=	9	4	7	32.4092=	32	8	2
52	37.8230=	37	16	6	9.5120=	9	10	3	33.6333=	33	12	8
53	38.1064=	38	2	2	9.7944=	9	15	11	34.9069=	34	18	1
54	38.3182=	38	6	4	10.0665=	10	1	4	36.1957=	36	3	11
55	38.5856=	38	11	8	10.3585=	10	7	2	37.6155=	37	12	4
56	38.7730=	38	15	6	10.6332=	10	12	8	39.0442=	39	0	11
57	38.9636=	38	19	3	10.9101=	10	18	2	40.5600=	40	11	2
58	39.0943=	39	1	11	11.1612=	11	3	3	42.0174=	42	0	4
59	39.2306=	39	4	7	11.4155=	11	8	4	43.6476=	43	12	11
60	39.3181=	39	6	4	11.6781=	11	13	7	45.3396=	45	6	9
61	39.3446=	39	6	11	11.9263=	11	18	6	47.0714=	47	1	5
62	39.3230=	39	6	6	12.1706=	12	3	5	48.8872=	48	17	2
63	39.2335=	39	4	8	12.4086=	12	8	2	50.7435=	50	14	10
64	39.0885=	39	1	9	12.6482=	12	13	0	52.6406=	52	12	10
65	38.8004=	38	16	0	12.9001=	12	18	0	54.6566=	54	13	2
66	38.5405=	38	10	10	13.1378=	13	2	9	57.0576=	57	1	2
67	38.3215=	38	6	5	13.4168=	13	8	4	58.7560=	58	15	1
68	37.9309=	37	18	7	13.6801=	13	13	7	60.7526=	60	15	1
69	37.6913=	37	13	10	13.9090=	13	18	2	62.4425=	62	8	10

PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK DURING LIFE, FOR THE THIRD SIX MONTHS' SICKNESS AFTER A CONTINUOUS SICKNESS OF TWELVE MONTHS; PRESENT VALUE OF A SICK GIFT FOR THE FOURTH SIX MONTHS' SICKNESS AFTER A CONTINUOUS SICKNESS OF EIGHTEEN MONTHS; AND THE PRESENT VALUE OF A SICK GIFT FOR LIFE AFTER A CONTINUOUS SICKNESS OF EIGHTEEN MONTHS.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.—INTEREST, THREE PER CENT.

AGE.	THIRD SIX MONTHS.				FOURTH SIX MONTHS.				AFTER EIGHTEEN MONTHS.			
	Present Value.				Present Value.				Present Value.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	1.8555=	1	17	1	1.4158=	1	8	4	11.4339=	11	8	8
19	1.9428=	1	18	10	1.4528=	1	9	1	11.8522=	11	17	0
20	2.0141=	2	0	3	1.5077=	1	10	2	12.3213=	12	6	5
21	2.0916=	2	1	10	1.5659=	1	11	4	12.8105=	12	16	2
22	2.1653=	2	3	4	1.6200=	1	12	5	13.2928=	13	5	10
23	2.2366=	2	4	9	1.6825=	1	13	8	13.7904=	13	15	10
24	2.3081=	2	6	2	1.7362=	1	14	9	14.3008=	14	6	0
25	2.3801=	2	7	7	1.7965=	1	15	11	14.8250=	14	16	6
26	2.4531=	2	9	0	1.8587=	1	17	2	15.3647=	15	7	4
27	2.5272=	2	10	7	1.9231=	1	18	6	15.9212=	15	18	5
28	2.6039=	2	12	1	1.9888=	1	19	9	16.4937=	16	9	10
29	2.6796=	2	13	7	2.0591=	2	1	2	17.1520=	17	3	0
30	2.7592=	2	15	3	2.1295=	2	2	7	17.7692=	17	15	4
31	2.8445=	2	16	11	2.2036=	2	4	1	18.4234=	18	8	6
32	2.9264=	2	18	6	2.2743=	2	5	6	19.0585=	19	1	2
33	3.0147=	3	0	4	2.3484=	2	7	0	19.7350=	19	14	8
34	3.1067=	3	2	2	2.4233=	2	8	6	20.4201=	20	8	5
35	3.2030=	3	4	0	2.5066=	2	10	2	21.0340=	21	0	8
36	3.3040=	3	6	1	2.5820=	2	11	8	21.7618=	21	15	3
37	3.4104=	3	8	3	2.6572=	2	13	2	22.5059=	22	10	1
38	3.5211=	3	10	5	2.7229=	2	14	6	23.2691=	23	5	4
39	3.6350=	3	12	8	2.8050=	2	16	1	24.0547=	24	1	1
40	3.7508=	3	15	0	2.8841=	2	17	8	24.8654=	24	17	4
41	3.8674=	3	17	4	2.9665=	2	19	4	25.9338=	25	18	8
42	3.9832=	3	19	8	3.0537=	3	1	1	26.8310=	26	16	7
43	4.0988=	4	2	0	3.1614=	3	3	3	27.7435=	27	14	10
44	4.2072=	4	4	2	3.2679=	3	5	4	28.7096=	28	14	2
45	4.3278=	4	6	7	3.3696=	3	7	5	29.7062=	29	14	1
46	4.4630=	4	9	3	3.4841=	3	9	8	30.8195=	30	16	5
47	4.5835=	4	11	8	3.5871=	3	11	9	31.6661=	31	13	4
48	4.7191=	4	14	5	3.7028=	3	14	1	32.7954=	32	15	11
49	4.8590=	4	17	2	3.8308=	3	16	7	33.9738=	33	19	6
50	5.0021=	5	0	0	3.9551=	3	19	1	35.2054=	35	4	1
51	5.1477=	5	2	11	4.0832=	4	1	8	36.4924=	36	9	10
52	5.3025=	5	6	1	4.2095=	4	4	2	37.8428=	37	16	10
53	5.4508=	5	9	0	4.3436=	4	6	10	39.2505=	39	5	0
54	5.5920=	5	11	10	4.4743=	4	9	6	40.6702=	40	13	5
55	5.7432=	5	14	10	4.6153=	4	12	4	42.2308=	42	4	7
56	5.8567=	5	17	1	4.7767=	4	15	6	43.8207=	43	16	5
57	5.9960=	5	19	11	4.9141=	4	18	3	45.4741=	45	9	6
58	6.1202=	6	2	5	5.0410=	5	0	10	47.0584=	47	1	2
59	6.2516=	6	5	0	5.1639=	5	3	4	48.7915=	48	15	10
60	6.3802=	6	7	7	5.2979=	5	6	0	50.6375=	50	12	9
61	6.4993=	6	10	0	5.5270=	5	10	6	52.4984=	52	9	11
62	6.6211=	6	12	5	5.5496=	5	11	0	54.4367=	54	8	9
63	6.7452=	6	14	11	5.6634=	5	13	3	56.4069=	56	8	2
64	6.8616=	6	17	3	5.7866=	5	15	9	58.4272=	58	8	6
65	6.9773=	6	19	9	5.9228=	5	18	5	60.5794=	60	11	7
66	7.0973=	7	1	11	6.0405=	6	0	10	62.8981=	62	17	11
67	7.2165=	7	4	4	6.2003=	6	4	0	64.9563=	64	19	1
68	7.3211=	7	6	5	6.3590=	6	7	2	67.1116=	67	2	9
69	7.3926=	7	7	10	6.5164=	6	10	4	68.9589=	68	19	2

TABLE XLV.

ANNUAL PREMIUM PAYABLE QUARTERLY DURING LIFE FOR A SICK GIFT OF £1 PER WEEK DURING LIFE, FOR THE FOLLOWING PERIODS OF SICKNESS.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.—INTEREST THREE PER CENT.

Age.	First Six Months.			First Twelve Months.			Third Six Months.			Second Twelve Months.			After Two Years.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
18	1.0197	=1	0 5	1.1640	=1	3 3½	.0855	=0	1 8½	.1440	=0	2 10½	.4413	=0	8 10
19	1.0299	=1	0 7	1.1797	=1	3 7	.0860	=0	1 8½	.1505	=0	3 0	.4605	=0	9 2½
20	1.0408	=1	0 10	1.1962	=1	3 11	.0898	=0	1 9½	.1573	=0	3 2	.4816	=0	9 7½
21	1.0550	=1	1 1	1.2167	=1	4 4	.0939	=0	1 10½	.1653	=0	3 3½	.5040	=0	10 1
22	1.0680	=1	1 4½	1.2357	=1	4 8½	.0979	=0	1 11½	.1713	=0	3 5	.5281	=0	10 7
23	1.0821	=1	1 7½	1.2560	=1	5 1½	.1020	=0	2 0½	.1785	=0	3 7	.5520	=0	11 0½
24	1.0976	=1	1 11½	1.2778	=1	5 6½	.1061	=0	2 1½	.1860	=0	3 8½	.5782	=0	11 6½
25	1.1144	=1	2 3½	1.3011	=1	6 0	.1105	=0	2 2½	.1939	=0	3 10½	.6050	=0	12 1
26	1.1300	=1	2 7	1.3262	=1	6 6	.1150	=0	2 3½	.2021	=0	4 0½	.6321	=0	12 7½
27	1.1533	=1	3 1	1.3530	=1	7 1	.1196	=0	2 4½	.2107	=0	4 2½	.6529	=0	13 0½
28	1.1746	=1	3 6	1.3817	=1	7 7½	.1245	=0	2 6	.2197	=0	4 4½	.6942	=0	13 10½
29	1.1973	=1	3 11½	1.4082	=1	8 2	.1296	=0	2 7	.2293	=0	4 7	.7313	=0	14 7½
30	1.2280	=1	4 7	1.4487	=1	9 0	.1360	=0	2 8½	.2405	=0	4 10	.7696	=0	15 4½
31	1.2572	=1	5 2	1.4869	=1	9 9	.1418	=0	2 10	.2517	=0	5 0½	.8091	=0	16 2
32	1.2850	=1	5 8½	1.5238	=1	10 5½	.1480	=0	2 11½	.2630	=0	5 3	.8489	=0	16 11½
33	1.3146	=1	6 3½	1.5627	=1	11 3	.1545	=0	3 1	.2748	=0	5 6	.8911	=0	17 10
34	1.3457	=1	6 11	1.6037	=1	12 1	.1614	=0	3 3	.2873	=0	5 9	.9351	=0	18 8½
35	1.3785	=1	7 7	1.6468	=1	12 11	.1687	=0	3 4½	.3008	=0	6 0	.9769	=0	19 6½
36	1.4129	=1	8 3	1.6921	=1	13 10	.1766	=0	3 6½	.3147	=0	6 3½	1.0250	=1	0 6
37	1.4490	=1	9 0	1.7398	=1	14 9½	.1851	=0	3 8½	.3293	=0	6 7	1.0773	=1	1 6½
38	1.5041	=1	10 1	1.8106	=1	16 2½	.1963	=0	3 11	.3486	=0	6 11½	1.1451	=1	2 11
39	1.5265	=1	10 6½	1.8426	=1	16 10	.2035	=0	4 1	.3606	=0	7 2½	1.2222	=1	4 5½

TABLE XLV.—CONTINUED.

Age.	First Six Months.			First Twelve Months.			Third Six Months.			Second Twelve Months.			After Two Years.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
40	1.5682	=1 11	4½	1.8977	=1 17	11½	.2135	=0 4	3	.8776	=0 7	6½	1.2513	=1 5	0½
41	1.6116	=1 12	3	1.9558	=1 19	1½	.2237	=0 4	5½	.3956	=0 7	11	1.3166	=1 6	4
42	1.6567	=1 13	1½	2.0024	=2 0	0½	.2347	=0 4	8½	.4147	=0 8	3½	1.4015	=1 8	0½
43	1.7043	=1 14	1	2.0654	=2 1	3½	.2461	=0 4	11	.4360	=0 8	8½	1.4765	=1 9	6½
44	1.7548	=1 15	1	2.1326	=2 2	8	.2584	=0 5	2	.4579	=0 9	2	1.5589	=1 11	2
45	1.8073	=1 16	2	2.2026	=2 4	0½	.2706	=0 5	5	.4813	=0 9	7½	1.6471	=1 12	11½
46	1.8611	=1 17	2½	2.2747	=2 5	6	.2843	=0 5	8	.5062	=0 10	1½	1.7714	=1 15	5
47	1.9173	=1 18	4	2.3507	=2 7	0	.2989	=0 6	0	.5329	=0 10	8	1.8317	=1 16	7½
48	1.9758	=1 19	6	2.4299	=2 8	7	.3147	=0 6	3½	.5617	=0 11	3	1.9407	=1 18	10
49	2.0365	=2 0	9	2.5119	=2 10	3	.3316	=0 6	7½	.5931	=0 11	10½	2.0583	=2 1	2
50	2.0999	=2 2	0	2.5991	=2 12	0	.3505	=0 7	0	.6263	=0 12	6½	2.1853	=2 3	8½
51	2.1646	=2 3	3½	2.6879	=2 13	9	.3689	=0 7	4½	.6630	=0 13	3	2.3214	=2 6	5
52	2.2304	=2 4	7½	2.7897	=2 15	7½	.3898	=0 7	9½	.6993	=0 14	0	2.4721	=2 9	5½
53	2.2897	=2 5	9½	2.8642	=2 17	3½	.4097	=0 8	2½	.7361	=0 14	8½	2.6238	=2 12	6
54	2.3582	=2 7	2	2.9628	=2 19	3½	.4323	=0 8	8	.7783	=0 15	7	2.7987	=2 15	11½
55	2.4370	=2 8	9	3.0727	=3 1	5½	.4573	=0 9	2	.8248	=0 16	6	2.9956	=2 19	11
56	2.5134	=2 10	3	3.1801	=3 3	7	.4803	=0 9	7½	.8721	=0 17	5½	3.2023	=3 4	0½
57	2.5987	=2 11	11½	3.2541	=3 5	1	.5077	=0 10	2	.9238	=0 18	5½	3.4799	=3 9	7
58	2.6760	=2 13	6½	3.4128	=3 8	8	.5342	=0 10	8	.9743	=0 19	6	3.6681	=3 13	4½
59	2.7645	=2 15	3½	3.5421	=3 10	10	.5644	=0 11	3½	1.0307	=1 0	7	3.9370	=3 18	9
60	2.8447	=2 16	10½	3.6656	=3 13	3½	.5948	=0 11	10½	1.0887	=1 1	9½	4.2272	=4 4	6½

PRESENT VALUE AND ANNUAL PREMIUM PAYABLE QUARTERLY FOR LIFE, FOR A SICK ALLOW-
ANCE OF £1 PER WEEK DURING LIFE.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.
—RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

AGE.	SICK GIFT FOR LIFE.								AGE.	SICK GIFT FOR LIFE.											
	Present Value.				Annual Premium.					Present Value.				Annual Premium.							
	£	£	s.	d.	£	£	s.	d.		£	£	s.	d.	£	£	s.	d.				
18	39.7229	=	39	14	5	1.7493	=	1	14	11	41	63.3480	=	63	6	11	3.6680	=	3	13	4
19	40.4208	=	40	8	4	1.7907	=	1	15	10	42	64.7872	=	64	15	9	3.8186	=	3	16	4½
20	41.1507	=	41	3	0	1.8351	=	1	16	8½	43	66.2296	=	66	4	7	3.9779	=	3	19	6½
21	41.9971	=	41	19	11	1.8860	=	1	17	9	44	67.7239	=	67	14	6	4.1494	=	4	2	11
22	42.7702	=	42	15	5	1.9351	=	1	18	8½	45	69.2546	=	69	5	1	4.3310	=	4	6	7½
23	43.5656	=	43	11	4	1.9870	=	1	19	9	46	70.9922	=	71	0	0	4.5523	=	4	11	2
24	44.3852	=	44	7	8	2.0420	=	2	0	10	47	72.2843	=	72	5	8	4.7153	=	4	14	3
25	45.2317	=	45	4	7	2.1000	=	2	2	0	48	73.9436	=	73	18	10	4.9323	=	4	18	7½
26	46.1099	=	46	2	2	2.1614	=	2	3	3	49	75.6411	=	75	12	10	5.1633	=	5	3	3
27	47.0224	=	47	0	5	2.2266	=	2	4	6½	50	77.3761	=	77	7	6	5.4107	=	5	8	2½
28	47.9696	=	47	19	4	2.2956	=	2	5	11	51	79.1456	=	79	2	11	5.6723	=	5	13	5
29	48.9521	=	48	19	0	2.3688	=	2	7	4½	52	80.9683	=	80	19	4½	5.9528	=	5	19	0½
30	49.9701	=	49	19	5	2.4588	=	2	9	2	53	82.8077	=	82	16	2	6.2241	=	6	4	6
31	51.0802	=	51	1	7	2.5477	=	2	10	11	54	84.5804	=	84	11	7	6.5398	=	6	10	9½
32	52.1146	=	52	2	3	2.6357	=	2	12	8	55	86.5594	=	86	11	2	6.8931	=	6	17	10½
33	53.2408	=	53	4	9	2.7286	=	2	14	7	56	88.4504	=	88	9	0	7.2545	=	7	5	1
34	54.3920	=	54	7	10	2.8261	=	2	16	6	57	90.4337	=	90	8	8	7.6578	=	7	13	2
35	55.4876	=	55	9	9	2.9240	=	2	18	6	58	92.2729	=	92	5	5	8.0552	=	8	1	1
36	56.7157	=	56	14	4	3.0318	=	3	0	7½	59	94.2737	=	94	5	6	8.5138	=	8	10	3½
37	57.9748	=	57	19	6	3.1464	=	3	2	11	60	96.3358	=	96	6	8	8.9815	=	8	19	7½
38	59.2694	=	59	5	4	3.3043	=	3	6	1	61	98.3423	=	98	6	10	9.4646	=	9	9	3½
39	60.5971	=	60	11	11	3.4244	=	3	8	6	62	100.3808	=	100	7	7	9.9561	=	9	19	8½
40	61.9567	=	61	19	1	3.5266	=	3	10	6½	63	102.3836	=	102	7	8	10.5017	=	10	10	10½

SECESSIONS AND EXPULSIONS.

What must be understood by Secessions is all members leaving the Unity by their own act and deed, either for nonpayment of contribution, fines, or any other account except expulsion for violation of some rule. According to a Report issued by the directors of the Manchester Unity about 18 years ago, it is very certain that there was at that time, a large quantity of members joining and leaving the Order; and that since that period, the secessions have annually decreased until the last few years, when the same have become more regular. The Report says:—"The amount of initiation money which was received from members in 1844, being no less a sum than £49,382, it will be discovered on reference to the List of Lodges, that our increase of members in that year was only 21,461, and by these returns it,

is clearly proved that upwards of 40,000 members were initiated in 1844; thereby, at once, affirming that upwards of 20,000 members left the Order in one year, after paying their initiation money and contributions for a length of time. We are of opinion that the particular attention of the members of the Order should be drawn to this important fact with a view of arriving at the true cause why so many have left the Order." From the above quotation, it is seen that 20,000 members left the Unity by deaths, secessions, and expulsions, and as there were at the commencement of that year, 234,518 members, and assuming for that year the same rate of mortality as experienced for the last five years, 1.1887 per cent., there would have been 2,787 deaths, leaving 17,212 members seceded and expelled from the Unity in 1844, being 7.38 per cent. of the entire number.

In the year 1848 for the first time detailed reports were given of the position of the Unity, so far as regards the number of initiations, deaths, secessions, and expulsions. On the first day of January, 1847, there being then 257,005 members, it was seen by the returns received on the first day of January, 1848, 13,666 members had left the Order by secession and expulsion. In this would be included all members in the colonies, all persons entering the society, and leaving before entitled to the benefits. The average rate of secession by members entitled to benefits during the five years 1856-60 has been 2.67 per cent.

In the data from which Mr. Finlaison obtains the amount of sickness and mortality, the average rate of secessions, etc. is three per cent. It has been already stated, that no person has in any manner been included in this experience unless he was entitled to benefits. It was seen in analyzing the returns that a very large number of persons joined the Unity, but left without attaining that position, and principally to this cause may be attributed the difference in the per centage of secessions, as shown by the annual statement, and shown by these Returns when analyzed.

If within a period of 17 years, the Order has so much improved with respect to this element, may not further improvement be expected to take place during the next few years? Gentlemen of high position have, in making calculations, taken into consideration this element. However, if exercised at all, it should be with the greatest caution. On the other hand, it is considered by some that such an element ought not to be taken into account in any calculations for future payments, but that the proper time for making use of the profits of any lapsed policies is when the valuation of the Society's assets and liabilities is ascertained. Then, and then only should these profits be appropriated to the use of the members.

It was considered advisable in giving the following tables, to the members of the Unity, to state that they are given, not with a view to their practical use, but owing to the many opinions expressed as to the rate of profits coming to the association from this element, it was thought proper to place the same before the members for their judgment thereon.

It will be observed from the following table, that the great bulk of the members leave early in life, therefore they are not so profitable as they would have been had they remained a longer period. It must be considered that the value of their contribution is highest at the early ages; therefore the longer they remain up to a certain period, providing they do leave the society, the greater is the profit derived from their secession.

It is very apparent that members of increased ages place more value on being connected with a society of this nature; for, as the members increase in age, the secessions gradually become less.

TABLE XLVII.

MEMBERS SECEDED AND EXPELLED FROM THOSE BRANCHES OF THE MANCHESTER UNITY,
WHO HAVE FURNISHED RETURNS FOR 1856-60.

Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.
18	1	26	1247	34	621	42	288	50	80	58	25	66	8
19	14	27	1171	35	556	43	244	51	80	59	35	67	2
20	234	28	1135	36	497	44	225	52	58	60	17	69	1
21	496	29	927	37	474	45	197	53	56	61	19	70	2
22	841	30	860	38	477	46	181	54	48	62	11	74	1
23	1142	31	828	39	394	47	143	55	47	63	8	77	1
24	1336	32	715	40	338	48	151	56	38	64	3		
25	1355	33	700	41	305	49	109	57	34	65	2		
Total, 18778.													

The following table shows how the members die off and leave the society by secession, etc. It must be distinctly understood, that, from the past, we have a fair reason to anticipate future experience. So far as regards the rate of mortality, with the exception of slight improvement from sanatory and other causes, it may be expected that like results will occur; but, it is very probable that as institutions similar to the Unity become more valued, less secessions will take place.

Referring to Table XLVIII., it is seen out of 100,000 members at age 18 entering the society, 867 members die during the year; and that 1193 members leave the Unity by secessions and expulsions. It must be understood that this 100,000 has only been assumed, in order to show at that age out of this number how many die during the year, and how many members remain on entering their nineteenth year of life. Taking the number of persons entering at age 18, then will the deaths and secessions be in proportion thereto. Taking another age, 30, and it is seen that out of 100,000 members entering at age 18, 64,905 members only remain in the society, the remainder having died or left the Unity by secession or expulsion. During this year of life, out of the 64,905 members, 513 die off, and 1834 leave the Unity, a greater number out of less members than left the Unity at age 18.

Taking this table, and assuming a society of 100,000 members at age 18 to commence making provision for an assurance at death, owing to the numbers leaving the society, and the deaths that take place, the society is reduced to half its original number, between the ages 38-9. When the society terminates its existence, and the last life dies off, 45,048 members have left it by secession and expulsion, leaving only 54,952 members to be provided with an assurance at death.

The rate per cent. of secessions appears to increase from age 18 to 23, being then the highest; and from that age the per centage becomes gradually less, with a very slight exception after age 70. From age 18 to 41 the secessions over-number the deaths; and from the latter age a reverse takes place, when the deaths rapidly increase and out-number the secessions.

TABLE XLVIII.

MORTALITY AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.

AGE.	LIVING.	DYING.		SECESSIONS &c.		AGE.	LIVING.	DYING.		SECESSIONS &c.	
		Per Cent.	At Each Age.	Per Cent.	At Each Age.			Per Cent.	At Each Age.	Per Cent.	At Each Age.
18	100000	.8673	867	1.1934	1193	51	37643	1.7791	669	.5163	194
19	97940	.8553	837	1.6282	1598	52	36780	1.8628	685	.4798	176
20	95505	.8434	805	2.0530	1960	53	35919	1.9818	712	.4430	159
21	92740	.8195	760	2.4778	2351	54	35048	2.1170	742	.4332	151
22	89629	.7997	717	2.9026	2601	55	34155	2.2076	754	.4234	144
23	86311	.7842	677	3.3175	2863	56	33257	2.4325	809	.4136	137
24	82771	.7728	640	3.2923	2725	57	32311	2.6152	845	.4038	130
25	79406	.7658	608	3.2671	2588	58	31336	2.8157	882	.3939	123
26	76210	.7629	581	3.2419	2470	59	30331	3.0328	919	.3727	113
27	73159	.7639	559	3.2167	2353	60	29299	3.2681	951	.3515	102
28	70247	.7689	540	3.1915	2247	61	28246	3.5419	1000	.3303	93
29	67460	.7778	525	3.0092	2030	62	27153	3.7898	1029	.3091	84
30	64905	.7907	513	2.8269	1834	63	26040	4.0720	1059	.2880	75
31	62558	.8075	505	2.6446	1654	64	24906	4.3683	1087	.2843	70
32	60399	.8289	501	2.4623	1487	65	23749	4.6787	1111	.2806	66
33	58411	.8550	499	2.2800	1331	66	22572	5.0215	1133	.2769	62
34	56581	.8859	501	2.1132	1195	67	21377	5.3430	1142	.2732	58
35	54885	.9213	506	1.9464	1068	68	20177	5.7032	1150	.2692	54
36	53311	.9613	512	1.7798	948	69	18973	6.0822	1153	.2279	43
37	51851	.9994	518	1.6128	836	70	17777	6.4799	1151	.1866	33
38	50497	1.0353	527	1.4460	737	71	16593	6.8942	1143	.1453	24
39	49233	1.0692	526	1.3504	665	72	15426	7.3866	1139	.1040	16
40	48042	1.1011	529	1.2548	603	73	14271	7.9389	1132	.0624	9
41	46910	1.1309	530	1.1592	544	74	13130	8.5572	1123	.0949	12
42	45836	1.1468	526	1.0636	487	75	11995	9.2415	1108	.1274	15
43	44823	1.2089	542	.9680	434	76	10872	9.9897	1071	.1599	17
44	43847	1.2570	551	.8996	394	77	9784	10.7554	1057	.1924	18
45	42902	1.3117	563	.8312	356	78	8709	11.4187	994	.2252	19
46	41953	1.3723	575	.7628	319	79	7696	12.0955	931		
47	41089	1.4386	591	.6944	285	80	6765	12.7978	865		
48	40213	1.5104	607	.6258	251	81	5900	13.4336	792		
49	39355	1.5877	625	.5898	232	82	5108	14.3744	734		
50	38498	1.6707	643	.5528	212	83	4374	15.5802	681		

The present value of a sick gift is very considerably reduced, on account of the secession of members at the earlier ages, few of this class remaining in the Order up to a late period. When sickness begins to increase the secessions diminish, consequently reduces the difference in the present value of a sick gift, when compared with the experience of the Unity, without secessions included.

The following shows the value of the two sick gifts, both being similar in circumstances, secessions excepted, and the sick allowance being for life.

Age.	With Secession.				Without Secession.				Difference.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	24.8156=	24	16	4	39.8427=	29	16	10	15.0271=	15	0	6
25	29.5920=	29	11	10	44.6866=	44	13	9	15.0946=	15	1	11
30	36.9664=	36	19	4	49.3137=	49	6	3	12.3473=	12	6	11
35	45.4934=	45	9	10½	54.9296=	54	18	7	9.4362=	9	8	8½
40	54.2909=	54	5	9	61.2778=	61	5	6½	6.9869=	6	19	8½
45	63.3462=	63	6	11	68.4198=	68	8	5	5.0736=	5	1	6
50	73.0513=	73	1	0½	76.5265=	76	10	6½	3.4752=	3	9	6

From what has been previously stated, it will be anticipated that the present value of an assurance at death would be considerably less when the element of secession enters into the calculation. Members are annually leaving the society, and, by so doing, leave the amount contributed by them intended as provision for later years. It is very evident if only 54,592 out of 100,000 members remain in the society, and many of those leaving having contributed, some for a longer and others for a less number of years, the payment required from those who remain members would be reduced, by the amount received from all persons having left the society.

The following table shows the present value of an assurance at death, with and without the element of secession; for the purpose of better illustration, the assurance, in both instances, has been given for £10, rural, town, and city districts combined.

Age.	With Secession.				Without Secession.				Difference.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	2.095=	2	1	10½	3.317=	3	6	4	1.222=	1	4	5½
25	2.438=	2	8	9	3.618=	3	12	4½	1.180=	1	3	7½
30	2.996=	2	19	11	3.966=	3	19	4	.970=	0	19	5
35	3.620=	3	12	5	4.363=	4	7	3	.743=	0	14	10
40	4.223=	4	4	5½	4.773=	4	15	5½	.550=	0	11	0
45	4.819=	4	16	4½	5.233=	5	4	8	.414=	0	8	3½
50	5.410=	5	8	2½	5.724=	5	14	5½	.314=	0	6	3

It will be seen that the present value of an assurance at death follows the same rule as that for a sick allowance, the greatest difference being at the early ages; and as the secessions decrease, the difference in value, under the two conditions, gradually decreases likewise.

When the present value of a sick gift, or the present value of an assurance at death, has been obtained, the annual payment required, in place of that present value, is the present

value of either sick gift or assurance at death divided by the present value of an annuity, payable half-yearly or quarterly, &c., as it is intended the annual premium should be paid.

In the case of members of a friendly society uniting together to pay one annual sum, during life, if the number of years of life be ascertained, and these years of life be multiplied by the annual sum paid, and the same be divided by the number of members commencing the society, it would give the exact amount that each person on an average should pay; but as the sum is paid annually, and invested at interest, this amount must be discounted for the number of years, and this sum would be called the present value of an annuity payable during life. But if these circumstances be changed—if persons not only die off but secede and cease to pay, it is very evident that a less amount is paid by the whole members; therefore, taking the members who only contribute by remaining in the society, and dividing the whole sum paid by the number of members who commence the society, the amount per member will be less, and this will give the value of an annuity payable with secessions, other elements being the same. The following table shows the value of an annuity, payable with and without secessions, and the difference of the two annuities.

Age.	With Secessions.				Without Secessions.				Difference.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
20	15.0083	=15	0	2	21.7988	=21	15	11½	6.7905	=6	15	9½
25	15.1515	=15	3	0½	20.9141	=20	18	3½	5.7626	=5	15	3
30	15.7171	=15	14	4	19.6508	=19	13	0	3.9337	=3	18	8
35	15.8706	=15	17	5	18.3512	=18	7	0	2.4806	=2	9	7
40	15.4104	=15	8	2½	16.9431	=16	18	10½	1.5327	=1	10	8
45	14.4485	=14	8	11½	15.3650	=15	7	3½	.9165	=0	18	3½
50	13.1140	=13	2	3½	13.6785	=13	13	7	.5645	=0	11	4

The low price of the annuity with secessions, at the early ages, arises entirely from a large number of members ceasing to pay their annual premiums as before named. When the value is ascertained, without secessions, all the persons continue their payments for a longer time; therefore increase the amount paid and increase the value of the annuity. It is very evident, from the preceding table including secessions, that so far as the annual payment made by a member is concerned, that one at 20, paying the same rate of contribution as one at 40, there is only £15.4104—£15.0083=£.4021=£0 8s. 0½d. difference in the value of an annuity on those lives.

It has been previously shown, that when the element of secession is taken into consideration, whether as regards the present value of a sick allowance or an assurance at death, the same is considerably reduced in value. If any person be desirous of paying the value of either in one sum at the commencement of the assurance, or when he contracts for the sick gift, he ought to pay the amounts already given as the present value, with the element of secession. If a person contracts, in place of paying the amount in one sum, to pay the same in quarterly instalments, the parties contracting for payment of sick allowance or assurance at death, ought in justice to themselves to take in consideration the element of secession, and the present value of an annuity subject to this element, becomes very much reduced in value, as may be seen from the previous table.

We have the present value of a sick allowance and an assurance at death very considerably reduced by secession, and the present value of a sick allowance or assurance at death, being

divided by a present value of annuity, which also becomes very considerably reduced by this element, the difference in the annual premium is not so much as might have been expected, as will be seen from the following table.

ANNUAL CONTRIBUTION PAYABLE FOR LIFE FOR A SICK GIFT OF TEN SHILLINGS PER WEEK DURING SICKNESS FOR LIFE.—ANNUAL CONTRIBUTION PAYABLE THE SAME FOR AN ASSURANCE OF £10 AT DEATH.—MORTALITY, SICKNESS, AND SECESSIONS.—MANCHESTER UNITY, RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.—ANNUAL CONTRIBUTION PAYABLE QUARTERLY FOR THE SAME BENEFITS.—MORTALITY AND SICKNESS.—MANCHESTER UNITY, RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

AGE.	WITH SECESSIONS.						WITHOUT SECESSIONS.					
	Sickness.		Assurance at Death.		Total.		Sickness.		Assurance at Death.		Total.	
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20	0	16	6½	0	2	6½	0	18	4	0	2	11
25	0	19	7½	0	3	1½	1	1	0	0	3	4
30	1	8	6½	0	3	7	1	4	7	0	3	11
35	1	8	8	0	4	3½	1	9	3	0	4	7
40	1	15	2½	0	5	1½	1	15	3	0	5	5
45	2	3	10	0	6	3	2	3	4	0	6	6
50	2	15	7	0	7	8	2	14	1	0	8	0

ANNUAL CONTRIBUTION PAYABLE QUARTERLY FOR A SICK GIFT FOR LIFE; TO RECEIVE TEN SHILLINGS PER WEEK FOR FIRST TWELVE MONTHS, FIVE SHILLINGS PER WEEK FOR SECOND TWELVE MONTHS, AND THREE SHILLINGS PER WEEK AFTER A CONTINUOUS SICKNESS OF TWO YEARS; AND AN ASSURANCE OF £10 AT DEATH.—MORTALITY AND SICKNESS.—MANCHESTER UNITY, RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

Age.	Sick Gift. 10s.	Sick Gift. 5s.	Sick Gift. 3s.	Assurance at Death.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
20	0 11 11½	0 0 9½	0 1 5½	0 2 11	0 17 11½
25	0 13 0	0 0 11½	0 1 9½	0 3 4	0 19 11½
30	0 14 6	0 1 2½	0 2 1½	0 3 11	1 1 9½
35	0 16 5½	0 1 6	0 2 11	0 4 7	1 5 5½
40	0 18 11½	0 1 10½	0 3 9	0 5 5	1 10 0½
45	1 2 3½	0 2 5	0 4 11½	0 6 6	1 16 1½
50	1 6 0	0 3 1½	0 6 6½	0 8 0	2 3 8

TABLE XLIX.

PRESENT VALUE OF A SICK ALLOWANCE OF £1 PER WEEK DURING LIFE.—AND THE PRESENT VALUE OF AN ANNUITY OF £1 PER ANNUM ON ARRIVING AT 70 YEARS OF AGE.—MORTALITY, SICKNESS AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	Value of Sick Gft.				Value of Annuity.				Age.	Value of Sick Gft.				Value of Annuity.							
	£	£	s.	d.	£	£	s.	d.		£	£	s.	d.	£	£	s.	d.				
18	23.9278	=	23	18	6	.2609	=	0	5	2½	40	54.2909	=	54	5	10	1.0406	=	1	0	10
19	24.2967	=	24	5	11	.2743	=	0	5	6	41	56.2927	=	56	5	10	1.0972	=	1	1	11½
20	24.8156	=	24	16	4	.2818	=	0	5	8	42	57.8995	=	57	18	0½	1.1576	=	1	3	1½
21	25.4596	=	25	9	2	.3075	=	0	6	2	43	59.6847	=	59	13	8½	1.2194	=	1	4	4½
22	26.2670	=	26	5	4	.3276	=	0	6	6½	44	62.9358	=	62	18	8½	1.2833	=	1	5	8
23	27.1017	=	27	2	0	.3499	=	0	7	0	45	63.3462	=	63	6	11	1.3510	=	1	7	0
24	28.3717	=	28	7	5	.3764	=	0	7	6½	46	65.3578	=	65	7	2	1.4246	=	1	8	6
25	29.5920	=	29	11	10	.4051	=	0	8	1	47	67.0976	=	67	1	11½	1.4960	=	1	9	11
26	30.8911	=	30	17	10	.4338	=	0	8	8	48	69.0106	=	69	0	2½	1.5471	=	1	10	11½
27	32.2802	=	32	5	7	.4650	=	0	9	3½	49	70.9311	=	70	18	7½	1.6568	=	1	13	1½
28	32.7632	=	32	15	3	.4992	=	0	10	0	50	73.0513	=	73	1	0	1.7453	=	1	14	10
29	35.3455	=	35	6	11	.5353	=	0	10	8½	51	74.6869	=	74	13	9	1.8341	=	1	16	8
30	36.9664	=	36	19	4	.5732	=	0	11	5½	52	76.8693	=	76	17	4½	1.9385	=	1	18	9
31	38.5785	=	38	11	7	.6475	=	0	12	11½	53	78.8908	=	78	17	10	2.0441	=	2	0	10½
32	40.8116	=	40	6	3	.6537	=	0	13	1	54	80.9311	=	80	18	7½	2.1577	=	2	3	2
33	41.0690	=	41	1	4	.6967	=	0	13	11	55	83.3941	=	83	7	10½	2.3114	=	2	6	2½
34	43.7447	=	43	14	11	.7401	=	0	14	9½	56	85.1125	=	85	2	3	2.3834	=	2	7	8
35	45.4934	=	45	9	10	.7858	=	0	15	9	57	86.9120	=	86	18	3	2.5574	=	2	11	2
36	47.3616	=	47	7	3	.8387	=	0	16	9	58	89.4436	=	89	8	10½	2.8478	=	2	16	11½
37	49.0146	=	49	0	3	.8825	=	0	17	9	59	91.6644	=	90	13	3½	2.8716	=	2	17	5
38	50.3256	=	50	6	6	.9369	=	0	18	8½	60	94.1047	=	94	2	1	3.0819	=	3	1	7½
39	52.5223	=	52	10	6	.9859	=	0	19	9	61	96.0740	=	96	1	6	3.2929	=	3	5	10½

TABLE L.

PRESENT VALUE OF AN ASSURANCE OF £1 AT DEATH.—MORTALITY AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY.—INTEREST, THREE PER CENT.

Age.	Present Value.				Age.	Present Value.				Age.	Present Value.			
	£	£	s.	d.		£	£	s.	d.		£	£	s.	d.
18	.20491=	0	4	1	34	.34956=	0	7	0	50	.54104=	0	10	10
19	.20665=	0	4	1½	35	.36204=	0	7	3	51	.55157=	0	11	0½
20	.20950=	0	4	2½	36	.37443=	0	7	6	52	.56458=	0	11	3½
21	.21354=	0	4	3	37	.38669=	0	7	9	53	.57647=	0	11	6½
22	.21910=	0	4	4½	38	.39512=	0	7	11	54	.58821=	0	11	9
23	.22604=	0	4	6	39	.41044=	0	8	2½	55	.59997=	0	12	0
24	.23460=	0	4	8	40	.42231=	0	8	5½	56	.61222=	0	12	3
25	.24388=	0	4	10½	41	.43516=	0	8	8½	57	.62377=	0	12	5½
26	.25381=	0	5	1	42	.44609=	0	8	11	58	.63551=	0	12	8½
27	.26426=	0	5	3½	43	.45813=	0	9	2	59	.64717=	0	12	11½
28	.27540=	0	5	6	44	.47002=	0	9	5	60	.65855=	0	13	2
29	.28749=	0	5	9	45	.48194=	0	9	7½	61	.66993=	0	13	5
30	.29969=	0	6	0	46	.49497=	0	9	11	62	.68726=	0	13	9
31	.31205=	0	6	3	47	.50572=	0	10	1½	63	.69185=	0	13	10
32	.32454=	0	6	6	48	.51754=	0	10	4	64	.70350=	0	14	1
33	.33709=	0	6	9	49	.52926=	0	10	7	65	.71305=	0	14	3

TABLE LI.

PRESENT VALUE OF ANNUITY.—MORTALITY AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.—INTEREST, THREE PER CENT.

Age.	Present Value.				Age.	Present Value.				Age.	Present Value.			
	£	£	s.	d.		£	£	s.	d.		£	£	s.	d.
18	15.3620	=	15	7 3	37	15.7634	=	15	15 3	56	11.1858	=	11	3 8
19	15.1557	=	15	3 2	38	15.6652	=	15	13 0	57	10.8542	=	10	17 1
20	15.0083	=	15	0 2	39	15.5468	=	15	10 11	58	10.5520	=	10	11 0
21	14.9195	=	14	18 4	40	15.4101	=	15	8 2	59	10.2028	=	10	4 1
22	14.9004	=	14	18 0	41	15.2930	=	15	5 10	60	9.8789	=	9	17 7
23	14.9371	=	14	18 9	42	15.0838	=	15	1 8	61	9.5548	=	9	11 1
24	15.0436	=	15	0 10	43	14.8874	=	14	17 9	62	9.3366	=	9	6 9
25	15.1515	=	15	3 0	44	14.6753	=	14	13 6	63	8.9155	=	8	18 4
26	15.2606	=	15	5 0	45	14.4485	=	14	8 11	64	8.6234	=	8	12 6
27	15.3735	=	15	7 1	46	14.2422	=	14	4 10	65	8.3147	=	8	6 3
28	15.4916	=	15	9 10	47	13.9543	=	13	19 1	66	7.9693	=	7	19 5
29	15.6154	=	15	12 4	48	13.6866	=	13	13 9	67	7.7072	=	7	14 2
30	15.7171	=	15	14 4	49	14.4036	=	14	8 1	68	7.4106	=	7	8 3
31	15.7960	=	15	15 11	50	13.1140	=	13	2 3	69	7.1032	=	7	2 1
32	15.8517	=	15	17 0	51	12.7822	=	12	15 8	70	6.8267	=	6	16 6
33	15.8827	=	15	17 8	52	12.5062	=	12	10 2	71	6.5331	=	6	10 8
34	15.8883	=	15	17 9	53	12.1899	=	12	3 10	72	6.1102	=	6	2 2
35	15.8706	=	15	17 5	54	11.8676	=	11	17 4	73	5.9453	=	5	18 11
36	15.8294	=	15	16 7	55	11.5452	=	11	10 11	74	5.6711	=	5	13 5

TABLE LII.

CONTRIBUTION PAYABLE ANNUALLY FOR A SICK GIFT OF £1 PER WEEK FOR LIFE.—
CONTRIBUTION PAYABLE ANNUALLY FOR AN ANNUITY OF £1 PER ANNUM AFTER AGE
70.—MORTALITY, SICKNESS, AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN,
AND CITY.—INTEREST, THREE PER CENT.

AGE	ANNUAL CONTRIBUTION.								AGE	ANNUAL CONTRIBUTION.											
	For Sick Allowance.				For Annuity.					For Sick Allowance.				For Annuity.							
	£	£	s.	d.	£	£	s.	d.		£	£	s.	d.	£	£	s.	d.				
18	1.5683	=	1	11	4½	.01691	=	0	0	4	37	3.1093	=	3	2	2	.05598	=	0	1	1½
19	1.6038	=	1	12	1	.01809	=	0	0	4½	38	3.2491	=	3	5	0	.05865	=	0	1	2
20	1.6537	=	1	13	1	.01877	=	0	0	4½	39	3.3783	=	3	7	7	.06778	=	0	1	4½
21	1.7068	=	1	14	1½	.02061	=	0	0	5	40	3.5230	=	3	10	7½	.06952	=	0	1	4½
22	1.7628	=	1	15	3	.02198	=	0	0	5½	41	3.6750	=	3	13	6	.07174	=	0	1	5½
23	1.8193	=	1	16	5	.02342	=	0	0	5½	42	3.8378	=	3	16	9	.07634	=	0	1	6½
24	1.8859	=	1	17	8½	.02502	=	0	0	6	43	4.0090	=	4	0	2	.08190	=	0	1	7½
25	1.9532	=	1	19	3	.02673	=	0	0	6½	44	4.1909	=	4	3	10	.08744	=	0	1	9
26	2.0242	=	2	0	6	.02842	=	0	0	6½	45	4.3842	=	4	7	8	.09350	=	0	1	10½
27	2.0997	=	2	2	0	.03024	=	0	0	7½	46	4.5888	=	4	11	9½	.10007	=	0	2	0
28	2.1794	=	2	3	7	.03222	=	0	0	7½	47	4.8082	=	4	16	2	.10720	=	0	2	1½
29	2.2634	=	2	5	3	.03428	=	0	0	8½	48	5.0421	=	5	0	10	.11305	=	0	2	3
30	2.3519	=	2	7	0½	.03700	=	0	0	9	49	5.2915	=	5	5	10	.12360	=	0	2	5½
31	2.4451	=	2	8	10½	.04096	=	0	0	9½	50	5.5576	=	5	11	2	.13308	=	0	2	8
32	2.5448	=	2	10	10½	.04123	=	0	0	10	51	5.8970	=	5	17	11	.14348	=	0	2	10½
33	2.6459	=	2	12	11	.04386	=	0	0	10½	52	6.1466	=	6	2	11	.15500	=	0	3	1½
34	2.7532	=	2	15	1	.04658	=	0	0	11½	53	6.4716	=	6	9	5	.16760	=	0	3	4½
35	2.8665	=	2	17	4	.04951	=	0	0	11½	54	6.8195	=	6	16	5	.18181	=	0	3	7½
36	2.9851	=	2	19	8	.05298	=	0	1	0½	55	7.2238	=	7	4	6	.20022	=	0	4	0

TABLE LIII.

CONTRIBUTION PAYABLE ANNUALLY FOR LIFE, FOR AN ASSURANCE OF £1 AT DEATH.—
MORTALITY AND SECESSIONS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS.
—INTEREST, THREE PER CENT.

Age.	Contribution.				Age.	Contribution.				Age.	Contribution.			
	£	£	s.	d.		£	£	s.	d.		£	£	s.	d.
18	.01250	=0	0	3	31	.01857	=0	0	4 $\frac{1}{2}$	44	.02998	=0	0	7 $\frac{1}{2}$
19	.01279	=0	0	3	32	.01925	=0	0	4 $\frac{3}{4}$	45	.03121	=0	0	7 $\frac{3}{4}$
20	.01308	=0	0	3	33	.02000	=0	0	5	46	.03247	=0	0	7 $\frac{3}{4}$
21	.01341	=0	0	3 $\frac{1}{4}$	34	.02069	=0	0	5	47	.03381	=0	0	8
22	.01377	=0	0	3 $\frac{1}{4}$	35	.02146	=0	0	5 $\frac{1}{4}$	48	.03523	=0	0	8 $\frac{1}{4}$
23	.01418	=0	0	3 $\frac{1}{4}$	36	.02224	=0	0	5 $\frac{1}{4}$	49	.03674	=0	0	8 $\frac{3}{4}$
24	.01462	=0	0	3 $\frac{1}{2}$	37	.02306	=0	0	5 $\frac{1}{2}$	50	.03830	=0	0	9 $\frac{1}{4}$
25	.01549	=0	0	3 $\frac{3}{4}$	38	.02391	=0	0	5 $\frac{3}{4}$	51	.04001	=0	0	9 $\frac{1}{2}$
26	.01560	=0	0	3 $\frac{3}{4}$	39	.02480	=0	0	6	52	.04180	=0	0	10
27	.01613	=0	0	3 $\frac{3}{4}$	40	.02573	=0	0	6 $\frac{1}{4}$	53	.04370	=0	0	10 $\frac{1}{2}$
28	.01669	=0	0	4	41	.02672	=0	0	6 $\frac{1}{2}$	54	.04571	=0	0	11
29	.01730	=0	0	4 $\frac{1}{4}$	42	.02773	=0	0	6 $\frac{3}{4}$	55	.04783	=0	0	11 $\frac{1}{2}$
30	.01792	=0	0	4 $\frac{1}{4}$	43	.02883	=0	0	7					

ASSURANCE ON THE DEATH OF A MEMBER'S WIFE.

It appears to be customary in many societies to allow a sum of money at the decease of a member's wife. In some cases the allowance at the death of a wife is equal to that allowed at the death of a member; in other instances one-half the sum is allowed. There are instances where societies allow only a certain sum at the death of a member, but should he be married, and his wife dies previous to himself, he is at liberty to receive one-half the assurance at her death, and the remainder is paid to his representative at his death. In all these cases it is the general custom to charge to single and married members the same rate of annual premium, which is both injudicious and very unfair to the members who never marry.

In other cases societies charge an annual sum to be paid by members who desire to contract an assurance on the life of the wife. The following table has been prepared to enable societies to grant an assurance on the life of the member's wife, by an annual payment made during the joint lives, and which payment would cease, either on the death of the wife, at which time he would receive the amount of assurance, or it would cease, according to the contract, at his death, he being no longer a member of the society.

Whether the member contracts to pay an annual premium until the death of himself or his wife takes place, or he contracts to pay an annual premium during his life, makes no difference to the society.

In the first named case, as the payment of the annual premium would cease, either at the death of himself or his wife, the annual premium would be higher, in the latter, the annual premium being payable during the member's life, does not cease at death of the wife, therefore, a less annual premium is required.

By charging this annual premium to members who derive the benefit from the assurance is only fair and just, and if a scale of payments fair to the member, and just to the society, be established, he could according to his circumstances insure for a less or a greater sum, as he felt enabled to pay for. Also the members not married would be exempt from this payment, but could at any future time contract an assurance with the society, the future annual payments being dependent on the age of the member and his wife, at the time of making the contract.

In many societies it is customary to allow a widow on the death of her husband to contribute a certain amount to the society annually, and at her death her representatives have a claim for the amount of benefit allowed; and the districts composing the Manchester Unity appear to adopt one fixed payment, whatever the age of the widow may be. It must be very apparent that this is unjust to the society, as younger persons who would probably pay such an amount as to meet their liabilities, will not often avail themselves of this assurance, but the society is certain to receive a claim from others who are more advanced in years, and very probably bringing far greater liabilities than the value of their annual payments.

If a member was desirous of contracting an assurance on the death of his wife, and to pay an annual premium only so long as he or his wife might live, according to the rate of mortality experienced for the years 1856-60 in the Manchester Unity, he should be charged the annual premium given in the last column of the table; but if he be desirous of effecting an assurance on the death of his wife, such annual payment to be continued during his life, then the annual premiums in the third column of Table LIV. gives the sum that should be charged for such assurance.

No assurance of this nature should be granted to a member unless he has effected an assurance for sickness and death on his own life, and for such an amount as would be binding that he made good all future payments; for by effecting such assurances without such guarantee, in case of the death of the female the society would suffer a loss, as the member having no further claim would cease to make good his payments.

It may be as well to say that these values have been calculated on the assumption that the ages of members and their wives are equal, and that the same rate of mortality is experienced by members and their wives; this not being exactly the case, the tables are given more as a model, and from the great difference which has been shown to be experienced by persons of different trades, should only be used with great care and caution.

TABLE LIV.

PRESENT VALUE OF AN ASSURANCE OF £1 AT DEATH OF FEMALE, PROVIDING THE MALE BE THEN LIVING, THE ANNUAL PREMIUM PAYABLE UNTIL ONE OF THE LIVES DIES OFF, AND THE ANNUAL PREMIUM PAYABLE QUARTERLY DURING THE LIFE OF THE MALE.—MORTALITY MANCHESTER UNITY FRIENDLY SOCIETY.—LIVES OF EQUAL AGES.—INTEREST THREE PER CENT.

Age.	Present Value of an Assurance.				Annual Premium Payable during Member's Life.				Annual Premium Payable during both lives.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	.22523	=0	4	6	.00991	=0	0	2½	.01228	=0	0	3
19	.22701	=0	4	6½	.01005	=0	0	2½	.01247	=0	0	3
20	.22895	=0	4	7	.01021	=0	0	2½	.01264	=0	0	3
21	.23105	=0	4	7½	.01037	=0	0	2½	.01285	=0	0	3
22	.23338	=0	4	8	.01055	=0	0	2½	.01313	=0	0	3½
23	.23594	=0	4	8½	.01076	=0	0	2½	.01340	=0	0	3½
24	.23870	=0	4	9½	.01098	=0	0	2½	.01370	=0	0	3½
25	.24165	=0	4	10	.01127	=0	0	2¾	.01409	=0	0	3½
26	.24478	=0	4	10¾	.01147	=0	0	2¾	.01438	=0	0	3½
27	.24801	=0	4	11½	.01174	=0	0	2¾	.01476	=0	0	3½
28	.25142	=0	5	0½	.01203	=0	0	3	.01517	=0	0	3¾
29	.25500	=0	5	1½	.01234	=0	0	3	.01561	=0	0	3¾
30	.25867	=0	5	2	.01273	=0	0	3	.01607	=0	0	3¾
31	.26189	=0	5	2¾	.01306	=0	0	3	.01649	=0	0	4
32	.26629	=0	5	4	.01346	=0	0	3½	.01709	=0	0	4
33	.27024	=0	5	4¾	.01385	=0	0	3½	.01764	=0	0	4½
34	.27475	=0	5	6	.01425	=0	0	3½	.01822	=0	0	4½
35	.27776	=0	5	6½	.01464	=0	0	3½	.01874	=0	0	4½
36	.28181	=0	5	7¾	.01506	=0	0	3½	.01937	=0	0	4¾
37	.28588	=0	5	8½	.01555	=0	0	3¾	.02002	=0	0	5
38	.28998	=0	5	9½	.01616	=0	0	4	.02071	=0	0	5
39	.29313	=0	5	10½	.01647	=0	0	4	.02147	=0	0	5½
40	.29830	=0	5	11½	.01698	=0	0	4	.02219	=0	0	5½
41	.30249	=0	6	0½	.01751	=0	0	4½	.02299	=0	0	5½
42	.30705	=0	6	1¾	.01809	=0	0	4½	.02386	=0	0	5¾
43	.31168	=0	6	2¾	.01872	=0	0	4½	.02482	=0	0	6
44	.31651	=0	6	4	.01939	=0	0	4½	.02587	=0	0	6½
45	.32135	=0	6	5	.02009	=0	0	4¾	.02698	=0	0	6½
46	.32520	=0	6	6	.02071	=0	0	5	.02790	=0	0	6¾
47	.33077	=0	6	7½	.02157	=0	0	5½	.02931	=0	0	7
48	.33595	=0	6	8½	.02240	=0	0	5½	.03064	=0	0	7½
49	.34040	=0	6	9¾	.02323	=0	0	5½	.03198	=0	0	7¾
50	.34602	=0	6	11	.02419	=0	0	5¾	.03371	=0	0	8
51	.35100	=0	7	0½	.02515	=0	0	6	.03536	=0	0	8½
52	.35592	=0	7	1¾	.02616	=0	0	6½	.03705	=0	0	8¾
53	.36028	=0	7	2½	.02707	=0	0	6½	.03867	=0	0	9½
54	.36618	=0	7	4	.02830	=0	0	6¾	.04085	=0	0	9¾
55	.37089	=0	7	5	.02953	=0	0	7	.04309	=0	0	10½
56	.37598	=0	7	6½	.03083	=0	0	7½	.04546	=0	0	11
57	.38078	=0	7	7½	.03224	=0	0	7¾	.04791	=0	0	11½
58	.38612	=0	7	8¾	.03370	=0	0	8	.05086	=0	1	0½
59	.39120	=0	7	10	.03533	=0	0	8½	.05382	=0	1	1
60	.39552	=0	7	11	.03687	=0	0	8¾	.05678	=0	1	1¾

ANNUITY, &c., TABLES.*

HAVING obtained the results already given, it was deemed advisable that tables, showing the value of annuities, sick-gift, temporary annuity, and assurance at death, for the various districts, should be calculated from the returns, for the purpose of comparing the values with each district, and with other tables of a similar nature.

This portion of the work being intended mainly for the use of members of the Manchester Unity, and other benefit societies, it is believed that a plain and simple explanation of the nature of the various payments requisite to be made, and of the mode of adjusting and determining their amounts, will be more acceptable, and more conducive to the establishment on a permanent basis of similar institutions, than any elaborate or scientific disquisition.

Attention must first be directed to the Annuity Table No. LV., for the districts separate and combined; this table gives the value of an annuity of £1 per annum, according to the mortality existing in those districts, and for the ages given in that table. Supposing, for example, a person 20 years of age, residing in the rural districts, wished to secure an annuity of £1 per annum during his life, on referring to the table named, under the head Rural District, and opposite age 20, will be found £22.3382 = £22 : 6 : 9, being the amount which ought to be paid for the required annuity; and every other annuity bears the same proportion.

An annual contribution may be termed an annuity, and supposing a person desired to possess a property, and had not immediate means, but instead of making one present payment, proposed to pay a certain annual amount during life, it is by reversing the former position, viz., by dividing the value of such purchase by the value of an annuity for the age of the person, that the amount of such an annual contribution as would be equal to a present payment is obtained; that is, supposing the annual payment to be made at the end of every year; if made at the commencement of each year, unity must be added to the value of the annuity, before dividing the present value by the value of the annuity. This will be more fully explained in treating of contributions.

The value of annuities depends upon the probability of life, and upon the rate of discount in money, and it may be advisable that a brief explanation be given of these terms.

In a numerical point of view, the probability of any future event occurring is the result of dividing the number of cases by which such event can happen, by the number of cases favourable and against the same. At Table XI., age 18, for example, it is seen that 100,000 persons are alive, and that in passing through that year 867 cases of death occur, leaving 99,133 persons who enter on the nineteenth year; there are therefore 867 cases in favour, and 99,133 cases against, the occurrence of the event; if the cases that happen, 867, be divided by all the cases ($867 + 99,133 = 100,000$) it will give the probability of dying, before entering on the next year of life, and if the cases against the happening of the event, 99,133, be divided by the whole number of cases for and against, it will give the probability of living, and entering on the nineteenth year. To ascertain the probability of living to age 20, and of dying before that year, we must observe, in the same table, at age 20, that 98,285 persons are alive, and that in passing from 18 to 20, 1,715 persons have died; the probability of living from age 18 to 20, is the number living and entering on the twentieth

* From Observations on the rate of mortality and sickness in the Manchester Unity, 1846-8, corrected for the present experience.

year, divided by the numbers living at age 20, and the number that have died in passing from 18 to 20: $\frac{98285}{1715+98285} = .98285$, the probability of living. And the probability of dying is the cases of death that occur in passing from age 18 to 20, divided by the whole number of cases in favour or against the happening of the event $\frac{1715}{1715+98285} = .01715$, the probability of dying before entering on the twentieth year. In the same manner the probability, at age 18, of dying before attaining age 70, is the number of deaths that occur up to that time, 63,826, divided by the whole number of cases in favour and against the happening of the event: $\frac{63826}{36174+63826} = .63826$, the probability of dying before entering on the seventieth year. And the probability of living at age 18, to enter on that year of life, is the number of cases living at age 70, divided by the number of cases living and dying: $\frac{36174}{36174+63826} = .36174$, the probability of living at 18 to 70 years of age.

Let it be supposed that the 100,000 persons at age 18 enter into an agreement that all the persons living and entering on their seventieth year should receive the sum of £1 each; it is very evident that each of the 100,000 persons would have to pay at once a sum of money equal to the probability of the event, $.36174 = £0 : 7 : 2\frac{3}{4}$, and this amount, being paid by all at age 18, would pay to each person living and entering on the seventieth year the sum of £1; or suppose that these 100,000 persons enter into another arrangement, to make a present payment of such a sum as would give £1 each to every person who might die before attaining age 70; it has been shown that the probability of dying before attaining that age is .63826, those persons would therefore have to pay each the amount of the probability, $£.63826 = £0 : 12 : 9$, and this amount being paid by all the persons would realise £63826, the amount requisite to pay the friends of each person the sum of £1 when death occurred.

It will have been observed that what has been hitherto advanced has reference to probability only, without regard to interest of money, and it was stated that if 100,000 persons were to pay each the sum of $£.36174 = £0 : 7 : 2\frac{3}{4}$, it would yield to each person living and entering on the seventieth year the sum of £1; and as this amount would not be required for 52 years, each person should pay such a sum of money as would, at compound interest, realise the amount of $£0 : 7 : 2\frac{3}{4}$; now, to find the present payment, that amount must be discounted * for 52 years; that is, such a sum of money must be paid as would, at interest, by the time it was required, realise the amount named, and if the sum of $£.077774 = £0 : 1 : 6\frac{1}{2}$ be invested at three per cent. per annum, compound interest, by each person at 18 years of age, this amount would accumulate to the sum of $£.36714 = £0 : 7 : 2\frac{3}{4}$, and for 100,000 persons would yield £36714, which would allow to each person on entering the seventieth year the sum of £1.

From the probability of living, and the discounting of money, a table of the value of annuities can be calculated, and throughout the whole of the following tables the sum of £1 has been made the subject of calculation, as the values of that sum being obtained, any other amount will bear a relative proportion to it.

On reference to the same Table, it will be seen that 100,000 persons are alive at age 18, and were they to provide for an annuity of £1 to every person who might be living at the end of the year, it is evident they must pay such an amount as would yield to 99,133 persons the sum of £1 each; the amount, then, divided by 100,000 $\frac{99133}{100000} = £.99133$, the value of the annuity for that year. At age 19, 98,285 live to the end of the year, and

* Most of the works which treat on annuities and reversions give tables of the present value of £1 to be discounted for any number of years under 100, at various per centages. If reference be made to one of these tables, and it is wished to discount £1 for 52 years at three per cent., it will be seen that the present value of £1 discounted 52 years, is $£.215012$, or, in other words, this amount, improved at three per cent. compound interest for 52 years, will yield £1, and if any other sum, would be in proportion.

enter on the 20th year, these persons, for that year, would consequently receive the annuity, and the amount, £98,285, divided by the 100,000 living at age 18, $\frac{98285}{100000} = £.98285$, would be the value of the annuity for that year. In passing through the next year, age 20, 829 persons die, leaving 97,456 persons who live to receive the annuity, and who enter on the 21st year of life, and which value would be $\frac{97456}{100000} = £.97456$. In the following year, age 21, 799 persons die, leaving 96,657 persons alive at the end of the year, and who would become entitled to the annuity, and the value of which would be $\frac{96657}{100000} = £.96657$; and if each age in the table were taken in the same manner, the sum total of these amounts would be the value of the annuity, at age 18, calculated on the probability of life.

It will be observed that these respective amounts are paid *immediately*, and as the annuity for the first year would only have to be paid at the end of the year, such an amount only need be *immediately* paid, as would, with its interest, increase to the actual money value at the end of that year; therefore, if the value of the first year's annuity be discounted for one year, the value of the annuity calculated upon the probability of life and interest of money, would be obtained for the first year; the second year's annuity would only require to be paid at the end of the second year, the third year's annuity at the end of the third year; therefore the amount required for payment of that annuity would be required to be discounted for two, three, &c. years, so that it would ultimately stand as follows:—

Annuity.		Probability.	Discount.	Value each year.
Age 18	£1	$\times \frac{99133}{100000}$	$\times .970874$	= .96467
„ 19	£1	$\times \frac{98285}{100000}$	$\times .942596$	= .92728
„ 20	£1	$\times \frac{97456}{100000}$	$\times .915142$	= .89186
„ 21	£1	$\times \frac{96657}{100000}$	$\times .888487$	= .85864
„ 22	£1	$\times \frac{95884}{100000}$	$\times .862609$	= .82710
				<u>4.36955</u>

So that, at age 18, for an annuity of £1 per annum for five years, should the person live so long, he ought to pay £4.3695 = £4 7s. 4½d for the same, interest of money being calculated at three per cent. per annum; and if this course were continued for every age in the table, the total would give the value of an annuity of £1 per annum for life to a person of 18 years of age; and if a similar course were pursued for every age in the table, the value of an annuity for each age would be obtained. Those persons requiring further information on the practicability of constructing a table of life annuities are referred to Dr. Price's Observations on Reversionary Payments.

Table LIV. gives the value of annuities for rural, town, and city districts, and for the three districts combined; the following table shows at decennial periods the present values from the experience of the Unity in 1856-60, and of the experience of 1846-8.

VALUE OF ANNUITIES.

AGE	EXPERIENCE OF 1846-8.				EXPERIENCE OF 1856-60.			
	Rural.	Town.	City.	Rural, Town, and City.	Rural.	Town.	City.	Rural, Town, and City.
	£	£	£	£	£	£	£	£
20	22.3304	21.8354	21.0815	21.6287	22.3382	21.7443	21.1083	21.7988
30	20.4327	19.6058	18.6639	19.4738	20.4970	19.6023	18.8714	19.6508
40	17.8174	16.9020	15.8062	16.6688	17.9315	16.8286	16.1991	16.9431
50	14.5655	13.4596	12.6709	13.2924	14.5861	13.5514	13.1695	13.6785
60	11.1577	9.8730	9.3910	9.8008	10.8619	9.9574	10.0907	10.1017
70	8.5435	7.7379	6.0344	7.0833	7.9367	6.5176	7.7594	6.8757

EXPLANATION.—If it be required to know the present value of a contribution to be paid annually at the termination of the year if the person lives, as suppose at age 20, rural, town, and city, multiply the contribution by the value here given, 21.6287, and the product will be the sum of money which any person of that age ought to pay in place of an annual contribution for life; but if the contribution is to be paid annually at the commencement of the year, the amount must be multiplied by $21.6287 + 1 = 22.6287$, for the reasons hereafter stated.

VALUE OF SICK ALLOWANCE.

In ascertaining the value of a sick allowance three elements enter into the calculation, probability of life, interest of money, and amount of sickness. On reference to Table XIV., rural, town, and city districts, it will be observed, that at age 18 each person experiences .8265 week's average sickness, and as previously stated, the sick allowance of £1 per week will form the basis of calculation. The value of that person's sickness for that year will be £.8265, and as the average sickness will be spread over the year, some persons experiencing sickness the first day in the year, some the second, and so on, it has been demonstrated that the probability of being sick any day during the year, is within a fraction equal to the discounting of the value of the year's sick allowance for six months; therefore the above amount, £.8265, will have to be discounted for half a year, and this gives the value of the first year's sick allowance.

During the next year, age 19, each person experiences .8263 weeks of average sickness, the value of which is £.8263; this amount requires discounting half a year, as before, and as previously stated, as only 99,133 persons out of the 100,000 persons living at age 18 enter on their 19th year, the amount of sick allowance would be reduced by the probability of living to receive it, which is $\frac{99133}{100000} = .99133$. Again, the amount, if paid at age 18, could, in the mean time, be invested on interest; therefore this amount would require to be discounted for one year, and this would give the value of the second year's sick gift. The next year in the table, age 20, shows an average sickness experienced of .8260 weeks, the value of which is £.8260; this, being discounted for half a year, as before, multiplied by the probability of living from age 18 to this year of life, $\frac{98285}{100000} = .98285$, and this amount, discounted for two years, gives the present value of an allowance for sickness for the third year. If this course be pursued up to age 70, the present value of a sick allowance of £1 per week, for a person of 18 years of age, for each year of life, will be obtained, and the sum total of all these values will give the present value of a sick allowance for the whole period from 18 to 70 years of age.

The following table shows the value of a sick gift to a person 65 years of age, for each year of life up to 70; the second column gives the value in sickness at each age; the third, discount for half a year; the fourth, the probability of living from 65 to the age opposite that probability; the fifth, the discount of £1 for the number of years; the last column gives the value of the sick allowance for that year only; and the sum total the value of an allowance of £1 per week during sickness, from 65 to 70 years of age.

**PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK FOR EACH YEAR
FROM 65 to 70.**

Age.	Amount of Sickness.		Discount Half a Year.		Probability of Living.	Discounted No. of Years.	Value.
65	£6.2018	×	.985221	×			= £5.5030
66	6.7152	×	.985221	×	.95320	×	.970874 = 6.1226
67	7.3398	×	.985221	×	.90534	×	.942596 = 6.1709
68	8.0757	×	.985221	×	.85698	×	.915142 = 6.2398
69	8.9208	×	.985221	×	.80811	×	.888487 = 6.3104
	<hr/> 38.2533						<hr/> 30.3467

It is seen that a person living experiences, in passing from 65 to 70 years of age, 38.2533 = 38 weeks, 1 day, 18 hours' sickness, the value of which is, at £1 per week, £38 5s. 0d.; but from the probability of living, and discounting of money, the value, at age 65, for an allowance of £1 per week during sickness, up to age 70, is £30.3467 = £30 6s. 11d.; and this sum ought to be paid, to effect an equitable assurance of £1 per week during sickness, for that period.

The following abstract shows the present value, at any of the following ages, for an allowance of £1 per week during sickness, from the experience of the Manchester Unity, in 1846-8, and 1856-60.

AGE	EXPERIENCE OF 1846-8.				EXPERIENCE OF 1860.			
	Rural.	Town.	City.	Rural, Town, and City.	Rural.	Town.	City.	Rural, Town, and City.
	£	£	£	£	£	£	£	£
20	30.0384	28.7868	32.7033	30.1767	30.3915	31.9803	29.2471	30.6817
30	34.9219	32.1166	39.2419	35.2097	33.7410	36.0944	32.8809	35.6496
40	40.6347	37.0724	47.0024	40.8040	38.1052	41.6462	37.8452	41.0696
50	45.9933	40.1698	53.9705	45.4933	41.1224	45.9742	44.3791	45.5242
60	44.8617	35.1881	53.0085	42.5792	35.6772	43.7045	40.2350	42.2727

Although there is a great difference at some of the ages, when rural is compared with rural, and town with town, etc., yet when the value of the sick gift in the combined districts are compared with each other, the greatest difference at any age is £.4399 = £0 8s. 9d.

DEFERRED ANNUITIES.

The average sickness experienced increases to such an extent after 70 years of age, as will be seen on reference to the value of a sick allowance for life, Table XLVI., that persons after that period become nearly permanent claimants, for if not incapacitated by sickness, they become incapable of following any regular employment. In many societies, the principle of deferred annuities has been established for the purpose of making provision for members at an advanced age; and if contributions for such purpose be commenced in the early period of life, the annual payment required is very inconsiderable in comparison with the benefits that arise from such a provision. The value of an annuity of £1 per annum has been already shown, and if 70 years of age be taken as the period at which the payment of annuities is to commence, it will be seen on reference to Table LV., rural, town, and city districts, that the value of an annuity of £1 per annum at age 70 is £6.8757 = £6 17s. 6d.; therefore that sum ought to be paid by any person for that annuity, to receive the same so long as he lived; but if this value of an annuity to be received on arriving at age 70, were paid for at an early period of life, the value would be reduced by the probability of living to that age, and if reference be made to Table LI., it will be seen that out of 100,000 persons living at age 18, 36,174 enter on their 70th year. If this annuity were purchased for these 36,174 persons at age 18, the amount would be paid by the 100,000 persons, so that it would then be impossible to predict who would live to receive it; this is the probability of living to age 70: $\frac{36174}{100000} = .36174$; and as the amount would be paid immediately, such an amount would only require to be paid, as would realise that sum at compound interest by the time it was required. If the amount, therefore, be discounted for 52 years, it will give the present value at age 18. Therefore the value of an annuity of £1 per annum at age 70, the probability of living to that age, and £1 discounted for the number of years, are required to ascertain the value of an annuity after 70 years of age, the value thereof to be paid at age 18.

Value of annuity of £1 per annum at age 70 = 6.8757

Probability of living to that age $\frac{36174}{100000} = .36174$

£1 discounted, intervening term, 52 years .215008.

Then $6.8757 \times .36174 \times .215008 = .5347 = £0\ 10s.\ 7d.$, present value of an annuity at age 18; such annuity to commence on attaining 70 years of age. It will be observed, that the value here given, and the value given in Table LVI., for the same annuity, vary, the one annuity being paid monthly, and the other annually, which will be hereafter more fully explained.

To revert to the deferred annuity. It has been shown that a payment of £0 10s. 7d., at age 18, will purchase an annuity of £1 per annum, to be received after attaining 70 years of age. It will be observed that 100,000 persons pay the sum, and the amount paid, being invested at compound interest, will have accumulated, when the lives have arrived at 70 years of age, to such an amount as will precisely pay the sum of £6 17s. 6d. for each of the 36,174 persons then living.

The following abstract shows the value of an annuity to be received after 70 years of age, and will give an idea of the variation in amount for the various districts.

PRESENT VALUE OF AN ANNUITY AFTER 70 YEARS OF AGE AT THE AGES GIVEN.

AGE	EXPERIENCE OF 1846-8.				EXPERIENCE OF 1856-60.			
	Rural.	Town.	City.	Rural, Town, and City.	Rural.	Town.	City.	Rural, Town, and City.
	£	£	£	£	£	£	£	£
20	.8407	.6288	.4418	.5836	.7816	.5930	.5804	.6156
30	1.2136	.9073	.6416	.8452	1.1303	.8590	.8474	.8954
40	1.7705	1.3355	.9590	1.2435	1.6468	1.2632	1.2703	1.3192
50	2.6625	2.0284	1.5323	1.9121	2.4483	1.9349	2.0073	2.0220
60	4.4107	3.4616	2.7279	3.2726	3.8626	3.2404	3.5796	3.4117

It will be observed, that great difference appears between the value of an annuity in rural and city districts. This principally arises from the higher rate of mortality in the city districts, for out of 100,000 members, commencing at age 18, only 30,520 live to 70 years of age, to receive the annuity. From the higher rate of mortality, these lives would die off quicker than in the rural Districts. For in the rural districts, out of 100,000 persons living at age 18, at 70 years of age, entitled to that, and every following year's annuity, there would be 36,174 alive to claim the same, and these lives would live longer to receive the annuity than in the city districts, on account of the low rate of mortality in the rural as compared with the city districts.

ASSURANCE AT DEATH.

Table XI. shows that at age 18, 100,000 persons are living, and that during that year 867 persons have died, leaving 99,133 persons who live to enter on the 19th year; during the next year, age 19, 848 persons die, leaving 98,285 persons, who live to enter on the 20th year; in the following year, age 20, 829 persons die, and 97,456 persons live, and enter on the 21st year of age. To provide an assurance of £1 each to every person at death, to be paid by the 100,000 persons living, it is evident that by dividing the number of deaths each year by the 100,000 persons living, the amount that should be paid by these persons would be found; and the number of deaths occurring each year, divided by the number of living at age 18, gives the probability of dying during each successive year, and the value of the assurance for the year.

At age 18	the probability of dying is	$\frac{867}{100000} = .00867$
„ 19	„	$\frac{848}{100000} = .00848$
„ 20	„	$\frac{829}{100000} = .00829$
„ 21	„	$\frac{799}{100000} = .00799$

If every age in the table were treated in a similar manner, the amount which ought to be paid by every person of the 100,000 for each year of life would be obtained, and the sum total would give the amount to be paid by every person to assure the sum of £1 at death, calculated on the probability of dying during the year; but if this amount were paid at age 18, it would be accumulating at interest, and as the amount for the first year would only be paid at the termination of the year, if such a sum of money were paid as would, at interest, at the time it was required, realise the amount, it would be sufficient. If the first year's amount be then discounted for a year, the second year's amount discounted for two years, the third year's amount discounted for three years, and the same course adopted for every year in the table, the present value of an assurance of £1 at death would be obtained for every age of life, and the sum total would give the present value for the sum of £1 at death, whenever that might occur. The following table more clearly expresses the method of obtaining such value.

PRESENT VALUE OF AN ASSURANCE OF £1 AT DEATH, FOR 6 YEARS.

Age.	Assurance.	Probability of Dying.	£1 Discounted. No. of Years.	Value of Assurance for £1 for one year.	Value of Assurance for £10.	Value of Assurance for each year for £10.
	£			£	£	£ s. d.
18	1 ×	.00867 ×	.970874 =	.00842	.0842	= 0 1 8½
19	1 ×	.00848 ×	.942596 =	.00799	.0799	= 0 1 7½
20	1 ×	.00829 ×	.915142 =	.00758	.0758	= 0 1 6½
21	1 ×	.00799 ×	.888487 =	.00709	.0709	= 0 1 5
22	1 ×	.00773 ×	.862609 =	.00666	.0666	= 0 1 4
23	1 ×	.00752 ×	.837484 =	.00629	.0629	= 0 1 3
				.04403	.4403	= 0 8 9½

The second column gives the amount of assurance, the third column the probability of dying during the year, the fourth column the value of £1 discounted number of years, the fifth column gives the value of an assurance of £1 at death for each of those years, and the total the value of an assurance of £1 at death, for the six years. This last column being small in value, it was thought advisable to attach two other columns, giving the value of an assurance for the sum of £10 at deaths for each of the years, and the total gives the value of an assurance of £10 at death for the six years there given.

The following table has been prepared to show at one view the present value of an assurance of £1 at death, at any of the following ages, from the experience of the Unity in 1846-8 and 1856-60.

PRESENT VALUE OF AN ASSURANCE OF £1 AT DEATH.

AGE.	EXPERIENCE OF 1846-8.				EXPERIENCE OF 1856-60.			
	Rural.	Town.	City.	Rural, Town, and City.	Rural.	Town.	City.	Rural, Town, and City.
	£	£	£	£		£	£	£
20	.3204	.3348	.3568	.3409	.3202	.3375	.3560	.3360
30	.3757	.3998	.4272	.4046	.3738	.3990	.4212	.3966
40	.4519	.4785	.5104	.4853	.4485	.4807	.4990	.4773
50	.5466	.5788	.6018	.5827	.5460	.5761	.5872	.5724
60	.6458	.6833	.6973	.6869	.6545	.6822	.6769	.6766

In comparing the rural with the rural, the town with the town, etc., experience of 1846-8 with that of 1856-60 the greatest difference appears in the city districts, age 60, the difference being $.0204 = £0 : 0 : 5$ in the present value of £1 at death; but when the rural, town, and city districts are compared, the difference is reduced to $.0103 = £0 \text{ Os. } 2\frac{1}{2}d$.

For the practical method of obtaining the values of life assurances, reference is made to Dr. Price's Observations on Reversionary Payments.

ANNUITIES PAYABLE MORE FREQUENTLY THAN ONCE IN A YEAR.

The values of annuities already treated of, suppose such annuities to be payable but once in the year. If an annuity be payable more frequently its value will be increased. A person who receives an annuity by equal instalments, half-yearly, will for two reasons, be placed under more favourable circumstances than he who receives an annuity yearly. In the first place he receives the half of his annuity six months earlier, and so gains one-half year's interest on every moiety; and further, he may live to receive a half-year's annuity more than the person who receives an annuity only once in, and at the end of, each year. An annuity payable half-yearly will therefore be of greater present value than one which is payable yearly. For similar reasons, an annuity payable quarterly will be of greater value than one which is payable half-yearly; and as the number of times at which an annuity may be payable in a year increases, so will its present value increase. The investigations requisite to determine precisely and with explicitness the differences in these values, would occupy some space, and as they are to be found in most works written expressly on the subject of life annuities, it is not deemed necessary to enter into them here.* It is thought sufficient to note that the excess in value of an annuity, payable in m equal instalments, at m equal intervals of a year, over the value of the same annuity payable yearly, will be $\frac{m-1}{2m}$ of a year's purchase, within a very insignificant fraction. This supposes that the first payment of the

* See particularly Mr. J. Milne's Treatise on Annuities and Assurances v. I., page 251, et seq.

m th part of the annuity will be made at the end of the m th part of a year from its commencement. When, therefore, the annuity is payable twice in each year, such excess of value is

$$\frac{2-1}{2 \times 2} \text{ or } \frac{1}{4} \text{ of a year's purchase:}$$

$$\text{When the annuity is payable } \left. \begin{array}{l} \text{four times in the year, it is } \end{array} \right\} \frac{4-1}{2 \times 4} = \frac{3}{8} \text{ of a year's purchase:}$$

$$\text{When monthly } \dots \dots \dots \frac{12-1}{2 \times 12} = \frac{11}{24} \text{ of a year's purchase:}$$

$$\text{When weekly } \dots \dots \dots \frac{52-1}{2 \times 52} = \frac{51}{104} \text{ of a year's purchase:}$$

$$\text{When payable daily } \dots \dots \dots \frac{365-1}{2 \times 365} = \frac{182}{365} \text{ of a year's purchase:}$$

And when it is payable *momently*, or an infinite number of times in a year, $\frac{\infty-1}{2}$ is equal to half, which is the limit of the increase in value to a yearly annuity that can arise in consideration of the annuity being payable more frequently than once in a year. So that, if we have found the value of an annuity on a given life payable yearly, the following additions should be made to such value, in order to obtain the value of an annuity on the same life, payable half-yearly, quarterly, monthly, weekly, daily, or momentarily.

The Additions to the value of the
Yearly Annuity should be

If an annuity be payable half-yearly	...	...	...	...	2500
"	quarterly	...	...	...	3750
"	monthly	...	...	...	4583
"	weekly	...	...	...	4904
"	daily	...	...	...	4986
"	momently	...	...	...	5000

And in determining the present value of a temporary or of a deferred annuity payable oftener than once in each year, we must for A and $A[t]^*$ payable yearly, substitute the values of annuities on the same lives increased by the above-mentioned quantities, as the cases may apply.

The foregoing values are those of annuities of £1, but it will be readily perceived that an annuity of £2 must be of double the value of an annuity of £1, or that $1 : 2 :: A : 2A$; and if the annuity be of any other amount, as £ a , the value will be proportionately increased, so that as $1 : a :: A : aA$. If, therefore, we know the value of (A), an annuity of £1: and we require the value of an annuity of £ a , we must multiply by £ a , the value of (A), an annuity of £1: and the same would evidently be true, if for A we substitute $A[t]$ or $A[t]^\dagger$.

Table LV. gives the value of an annuity of £1 per annum at age 18 to be 22.0829; if the annuity were to be paid at more times in the year the value would be

If paid half-yearly,		$.2500 + 22.0829 = 22.3329$
If paid quarterly	its value would be	$.3750 + 22.0829 = 22.4579$
" monthly	"	$.4583 + 22.0829 = 22.5412$
" weekly	"	$.4904 + 22.0829 = 22.5733$
" daily	"	$.4986 + 22.0829 = 22.5815$
" momentarily	"	$.5000 + 22.0829 = 22.5829$

* A value of an annuity; $A[t]$ value of an annuity to be entered on in $[t]$ years.
Treatise on Friendly Societies by C. Ansell, Esq., F.R.S.

ANNUAL CONTRIBUTIONS FOR SICK GIFTS, ANNUITIES, AND SUM AT DEATH.

When persons assure for any of the above benefits, they do not generally pay down at once the total present value of such sums, but engage to pay at stated periods such an annuity, called an annual premium, as may be equal, in present value, to that of the benefit to be received. The "present value" of an annuity is the present worth of a given payment to be made at the end of every year; but in paying, by annual premiums, the consideration for an assurance for any of these benefits, it is customary to pay one of such annual premiums at the commencement of the year in which the assurance may be made; so that if the annual premium were £1, the present worth of it on the life of a person age 18 (rural, town, and city districts), would be $1 + 22.0829 = 23.0829$; that is, it would be the value of an annuity on such life *increased by unity*; because the present value of the payment of £1, at the end of every year, has been previously calculated upon, and as the £1 to be paid at the beginning of the first year, would certainly be received, and would be unaffected by discount or probability, its value would of course be precisely £1; — thus making the total value of an annual premium of £1 to be $£1 + £22.0829 = £23.0829$, as previously stated.

If it be intended that the premiums should be payable m times in each year, we must, for the above value, substitute the value of an annuity, on the same life payable m times in each year (which has just been shown), increased by the m th part of a year's purchase; because, as the value of an annuity payable m times in each year supposes the payment of the m th part of the annuity to be made at the end of the m th part of a year from its commencement, while the m th part of a year's premium would be paid at the commencement of the assurance, the real value of the annuity or premium that the person assured would contract to pay, would be $\frac{1}{m} +$ the annuity payable m times in the year. The quantity, $\frac{1}{m}$, would, if the annuity were

	Payable half-yearly, be =	.5000
If payable quarterly, it would be =		.2500
„ monthly, „	=	.0833
„ weekly, „	=	.0192
„ daily, „	=	.0027
„ momentarily, „	=	.0000

The present values for a sick allowance of £1 per week during sickness, an annuity of £1 per annum after age 70, and an assurance of £1 at death, have already been treated of; if the present values of any of those benefits, at any of the ages, be divided by the value of an annuity of that age, it will give the annual premium requisite to be paid at the end of each year. As just observed, it is usual to pay the assurance at the commencement of the year, therefore, to find the annual premium payable at the commencement of the year, the present value must be divided by the annuity + 1; and if it were required to find the annual premium to be paid by monthly instalments at the commencement of the assurance, the present value of the benefit must be divided by the value of an annuity payable monthly, increased by one-twelfth of a year's purchase, .0833. The value of an annuity at age 18, payable monthly, as shown at page 113, and .0833 added thereto, would give 22.6295; and the present value of a sick allowance, or any other benefit, at the same age, divided by

this sum, would give the annual premium payable monthly in advance during life, which ought to be paid for that benefit.

Table LVI. shows the present value of a sick allowance of £1 per week up to age 70, at age 18, rural, town, and city districts, to be £29.1123; and it has been shown that the value of a contribution of the same amount per annum is worth 22.0829 year's purchase = the value of an annuity at the age; of if the present value of the sick allowance were divided by that number of year's purchase, it would give the amount of contribution to be paid annually so long as life continued; but it might be very probable that the person, not having any claim on the sick gift after 70 years of age, might cease to contribute; it therefore becomes requisite to make provision for the payment in the same period of time that he is entitled to the sick allowance, say up to 70 years of age. The value of the sick allowance must therefore be divided by the value of an annuity for the time he is entitled to the said allowance, and to obtain the value of an annuity for that period of time, the value of an annuity after 70 years of age must be deducted from the value of an annuity for life, and the remainder would be the value of an annuity up to 70 years of age. It will be observed that the annuity being paid monthly, the value thereof will be increased by the amount previously stated to be added to the value of annuities payable annually.

The value, by Table LV., rural, town, and city districts, of an annuity of £1 per annum, at 70 years of age, is 6.8757; and if .4583, on account of the same being paid monthly, be added thereto, it makes the value of an annuity of £1 per annum, at 70 years of age, payable monthly, to be 7.3340; and if this value of the annuity at 70 years of age be required for a person 18 years of age, it is evident that if such a sum were paid at the latter age as would realise, at compound interest, the value of the annuity at age 70, it would be quite sufficient; and if 7.3340 be discounted for 52 years, the difference in years between 18 and 70, such a sum would be obtained as would be the value of an annuity of £1 per annum, to commence at age 70, and to be paid for at 18 years of age. This amount is £1.5438 = £1 : 10 : 10, or the sum of £1 : 10 : 10 invested at three per cent., compound interest, when 18 years of age, would, by the time a person arrived at 70 years of age, realise the sum of £7.3340 = £7 : 6 : 8. On reference to Table XI. it will be seen that out of 100,000 persons living at age 18, only 36,174 persons live to enter on the 70th year of age, the remainder having died in passing through the previous years; therefore the amount is farther reduced, such a sum being required to be paid by each of the 100,000 persons as will provide £1.5438 = £1 : 10 : 10 for each of the 36,174 who may live to 70 years of age. The value of the annuity, after being discounted, being multiplied by the probability of living to 70 years of age, $\frac{36174}{100000} = .36174$, would give the present value £.5584 = £0 : 11 : 2, of an annuity of £1 per annum after 70 years of age, calculated from the discounting of money and probability of living; and that amount being deducted from 22.5411 (the value of an annuity payable monthly for life), would give the value of an annuity of £1 per annum up to age 70. And this amount, being increased by one-twelfth of a year's purchase, would give the value of an annuity, payable monthly, up to age 70, £22.0660; and the present value of the sick allowance, being divided by this sum, would give the annual contribution, payable monthly, for a sick gift of £1 per week up to 70 years of age.

Value of annuity at age 70, Table LXXXIV. 6.8757

Payable monthly4583

7.3340

Probability of living at age 18 to age 70, $\frac{36174}{100000} =$ 36174

Unity, discounted number of years (52)215008

Then $7.8340 \times .86174 \times .215008 = .5584$, value of an annuity after 70 years of age.

Value of an annuity at age 18, Table LV. 22.0829

Payable monthly4583

22.5411

Value of annuity after 70 years of age5584

21.9827

One-twelfth of a year's purchase0833

Value of annuity from 18 to 70 years of age, payable monthly 22.0660

Value of sick allowance at age 18, Table LVI. 29.1123

Then $\frac{29.1123}{22.0660} = 1.318 = £1 : 6 : 3$, annual contribution payable at age 18, by twelve monthly instalments, for an allowance of £1 per week during sickness, up to 70 years of age.

The rate of contributions given at Table LIX., for each of the districts, and the same combined, have been calculated for four quarterly payments in the year, and those payments to cease on arriving at 70 years of age; if it were desired to ascertain the contribution payable for life, the value of the sick gift for the respective age, divided by the value of an annuity for life, payable monthly, and one-twelfth of a year's purchase, would give the annual contribution payable monthly during life for the sick gift.

Value of annuity payable monthly, age 18 22.5411

One-twelfth of a year's purchase0833

22.6244

Value of sick allowance, age 18, Table LVI. 29.1123

Then $\frac{29.1123}{22.6244} = 1.2870 = £1 : 5 : 8$, annual contribution payable for life at age 18, for an allowance of £1 per week during sickness, up to age 70.

Table LIX. gives the amount of annual payments, by quarterly instalments, up to age 70, for an allowance of £1 per week during sickness, up to that age.

The attention of persons establishing friendly societies cannot be too frequently drawn to the necessity of making provision for an annuity after 70 years of age. If members can be prevailed upon, and will pay the necessary amount for such annuity, they will be making provision against a period when such an annuity is really necessary. For the proper establishment, and giving security to the members and to the societies granting deferred annuities, the legislature has very wisely made a provision in the Friendly Societies' Act, that the tables of payment charged by any society granting deferred annuities shall be certified by a competent actuary as sufficient to secure the annuity granted.

The present value, at age 18, of an annuity payable monthly, after 70 years of age, has been shown above to be $£.5584 = £0 : 11 : 2$, and the value of an annuity payable monthly, to age 70, is 22.0660, same page; the value of the annuity, .5584, being divided by the value of an annuity payable to age 70, will give the amount of annual premium payable by twelve monthly instalments up to age 70, for an annuity of £1 per annum after that age, should the life so long continue; and if it be required that the annual premium should be paid for life, the value of the annuity at age 70, being divided by the value of an annuity payable monthly for life, as shown above, will give the annual contribution payable for life, for an annuity after 70 years of age.

Table LX. gives the amount of annual contributions requisite to be paid at each age for an annuity of £1 after 70 years of age.

Table LVIII. gives the present value, at the ages stated, for an assurance of £1 at

death, and at page 110 is explained the principle of obtaining that present value; and it being customary, as before stated, for members of friendly societies to pay an equivalent to such present value by instalments, it becomes requisite to ascertain the premium to be paid in place of that present value. At age 18, Table LVIII., rural, town, and city districts, the present value, in one single payment, is £.3276 = £0 : 6 : 6.

Table LV., rural, town, and city districts, age 18, gives the value of an annuity payable annually for life to be 22.0829; and as the premiums hereafter given are for quarterly payments, .3750 added thereto, and one-fourth of a year's purchase, .2500, gives the value of an annuity payable quarterly during life to be 22.7079; and if the present value be divided by the value of the annuity payable quarterly during life, the annual premium payable by quarterly instalments for the assurance of £1 at death will be obtained. Any other assurance will bear a relative proportion; if it were required, for example, to ascertain the annual premium payable for an assurance of £100 at death; the present value of £1 at death, .3276, multiplied by the assurance £100, would give 32.76, and this amount, being divided by the value of the annuity just given, would give an annual premium of £1 : 8 : 10 to be paid by monthly instalments for the assurance of £100 at death.

Table LXI. shows the amount of contributions requisite for an assurance of £1 at death, and Table LIX. gives the amount of contributions requisite to be paid for the assurance of a sick gift of £1 per week during sickness up to age 70, the payment of contributions then to cease; Table LX. gives the amount of contributions requisite to be paid up to age 70 for an annuity of £1 per annum after that age; and if it were required to find the contribution requisite for any other benefit, it will be a proportional part; if for an assurance of £10 at death, the contribution must be ten times the amount given in the table; if for an assurance of 10 shillings per week in sickness $\frac{10}{20} = .5$ of the amount; and if for an annuity of £6 : 10 : 0 per annum, six and a half times the amount of contribution required for £1.

TABLE LV.

VALUE OF AN ANNUITY.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	22.5567	=22	11	1	22.0464	=22	0	11	21.5050	=21	10	1	22.0829	=22	1	8
19	22.4530	=22	9	1	21.9003	=21	18	0	21.3090	=21	6	2	21.9444	=21	18	11
20	22.3382	=22	6	9	21.7443	=21	14	10	21.1083	=21	2	2	21.7988	=21	16	0
21	22.2117	=22	4	3	21.5778	=21	11	4	20.9017	=20	18	0	21.6427	=21	12	10
22	22.0656	=22	1	4	21.3990	=21	8	0	20.6926	=20	13	10	21.4764	=21	9	6
23	21.9032	=21	18	1	21.2057	=21	4	1	20.4802	=20	9	7	21.2991	=21	6	0
24	21.7274	=21	14	7	21.0051	=21	0	1	20.2641	=20	5	3	21.1114	=21	2	3
25	21.5409	=21	10	10	20.7943	=20	15	11	20.0460	=20	0	11	20.9141	=20	18	3
26	21.3460	=21	6	11	20.5725	=20	11	5	19.8236	=19	16	6	20.7078	=20	14	2
27	21.1455	=21	2	11	20.3448	=20	6	11	19.5945	=19	11	10	20.4929	=20	9	10
28	20.9393	=20	18	9	20.1093	=20	2	2	19.3600	=19	7	2	20.2702	=20	5	5

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
29	20.7167	=20	14	4	19.8516	=19	17	0	19.1196	=19	2	5	20.0401	=20	0	10
30	20.4970	=20	9	11	19.6023	=19	12	1	18.8714	=18	17	5	19.6508	=19	13	0
31	20.2694	=20	5	5	19.3476	=19	6	11	18.6175	=18	12	4	19.4243	=19	8	6
32	20.0337	=20	0	8	19.0880	=19	1	9	18.3582	=18	7	2	19.1474	=19	2	11
33	19.7908	=19	15	10	18.8236	=18	16	6	18.0903	=18	1	10	18.8868	=18	17	9
34	19.5415	=19	10	10	18.5543	=18	11	1	17.8182	=17	16	4	18.6212	=18	12	7
35	19.3145	=19	6	3	18.2795	=18	5	7	17.5441	=17	10	11	18.3512	=18	7	0
36	19.0279	=19	0	6	18.0000	=18	0	0	17.2688	=17	5	4	18.0774	=18	1	7
37	18.7620	=18	15	3	17.7231	=17	14	5	17.0357	=17	0	9	17.8006	=17	16	0
38	18.4925	=18	9	10	17.4254	=17	8	6	16.7541	=16	15	1	17.5197	=17	10	5
39	18.2162	=18	4	4	17.1297	=17	2	7	16.4785	=16	9	7	17.2341	=17	4	8
40	17.9315	=17	18	8	16.8286	=16	16	7	16.1991	=16	4	0	16.9431	=16	18	10
41	17.6369	=17	12	9	16.4454	=16	8	11	15.9151	=15	18	4	16.6456	=16	12	11
42	17.3311	=17	6	7	16.2048	=16	4	1	15.6249	=15	12	6	16.3412	=16	6	10
43	17.0162	=17	0	4	15.8850	=15	17	8	15.3277	=15	6	6	16.0261	=16	0	6
44	16.6906	=16	13	7	15.5986	=15	12	0	15.0264	=15	0	6	15.6963	=15	13	11
45	16.3573	=16	7	2	15.2702	=15	5	5	14.7204	=14	14	5	15.3650	=15	7	4
46	16.0170	=16	0	4	14.9366	=14	18	9	14.4100	=14	8	2	15.0732	=15	1	6
47	15.6704	=15	13	5	14.5942	=14	11	10	14.0953	=14	1	11	14.7046	=14	14	1
48	15.3185	=15	6	4	14.2528	=14	5	1	13.7779	=13	15	7	14.3666	=14	7	4
49	14.9598	=14	19	2	13.9044	=13	18	1	13.4582	=13	9	2	14.0246	=14	0	6
50	14.5861	=14	11	6	13.5514	=13	11	0	13.1695	=13	3	5	13.6785	=13	13	7
51	14.2058	=14	4	1	13.1922	=13	3	10	12.8489	=12	17	0	13.3282	=13	6	7
52	13.8456	=13	16	11	12.8277	=12	16	7	12.5279	=12	10	7	12.9766	=12	19	6
53	13.4621	=13	9	3	12.4583	=12	9	2	12.1964	=12	3	11	12.6792	=12	13	7
54	13.0688	=13	1	4	12.1160	=12	2	4	11.8789	=11	17	7	12.3077	=12	6	2
55	12.6686	=12	13	4	11.8289	=11	16	7	11.5652	=11	11	3	11.9324	=11	18	8
56	12.2583	=12	5	2	11.4554	=11	9	1	11.2750	=11	5	6	11.5674	=11	11	4
57	11.8368	=11	16	9	11.0799	=11	1	7	10.9475	=10	18	11	11.2115	=11	4	3
58	11.5965	=11	11	11	10.7037	=10	14	1	10.6535	=10	13	1	10.8037	=10	16	1
59	11.2726	=11	5	5	10.3283	=10	6	7	10.3677	=10	7	4	10.4503	=10	9	0
60	10.8619	=10	17	3	9.9574	=9	19	2	10.0907	=10	1	10	10.1017	=10	2	0
61	10.4599	=10	9	2	9.5872	=9	11	9	9.8232	=9	16	6	9.7655	=9	15	4
62	10.0700	=10	1	5	9.2125	=9	4	3	9.5662	=9	11	3	9.4277	=9	8	7
63	9.7103	=9	14	2	8.8610	=8	17	3	9.3197	=9	6	5	9.0930	=9	1	10
64	9.3496	=9	7	0	8.5133	=8	10	8	9.0850	=9	1	8	8.7633	=8	15	3
65	8.9630	=8	19	3	8.1630	=8	3	3	8.8631	=8	17	3	8.4395	=8	8	9
66	8.5653	=8	11	3	7.8191	=7	16	5	8.5867	=8	11	9	8.1195	=8	2	4
67	8.1503	=8	3	0	7.4819	=7	9	8	8.3852	=8	7	8	7.8053	=7	16	1
68	7.7321	=7	14	8	7.1520	=7	3	0	8.1872	=8	3	9	7.4932	=7	9	10
69	7.3237	=7	6	6	6.8311	=6	16	7	7.9822	=7	19	8	7.1829	=7	3	8
70	7.9367	=7	18	9	6.5176	=6	10	4	7.7594	=7	15	2	6.8757	=6	17	6
71	6.5824	=6	11	8	6.2126	=6	4	3	7.5078	=7	10	2	6.5727	=6	11	5
72	6.2715	=6	5	5	5.9158	=5	18	4	7.2349	=7	4	6	6.2712	=6	5	5
73	5.9912	=5	19	10	5.6323	=5	12	8	6.8908	=6	17	10	6.0063	=6	0	1
74	5.7296	=5	14	7	5.3655	=5	7	4	6.5356	=6	10	9	5.7199	=5	14	5
75	5.4750	=5	9	6	5.1196	=5	2	5	6.1560	=6	3	1	5.4444	=5	8	9
76	5.2000	=5	4	0	4.8990	=4	17	11	5.7590	=5	15	2	5.1788	=5	3	7
77	4.9168	=4	18	4	4.7000	=4	14	0	5.3408	=5	6	10	4.9126	=4	18	3
78	4.6259	=4	12	6	4.5386	=4	10	9	4.9566	=4	19	2	4.6658	=4	13	4
79	4.3357	=4	6	9	4.3804	=4	7	7	4.6001	=4	12	0	4.4253	=4	8	6
80	4.0420	=4	0	10	4.1983	=4	4	0	4.2541	=4	5	1	4.1853	=4	3	8
81	3.7768	=3	15	7	4.0089	=4	0	2	3.8833	=3	17	8	3.9436	=3	18	10
82	3.5880	=3	10	9	3.7673	=3	15	4	3.5665	=3	11	4	3.6919	=3	13	10
83	3.3204	=3	6	5	3.4995	=3	10	0	3.2524	=3	5	1	3.4408	=3	8	10
84	3.1199	=3	2	5	3.2215	=3	4	5	2.8321	=2	16	8	3.1943	=3	3	10

TABLE LVI.

PRESENT VALUE OF A SICK GIFT OF £1 PER WEEK, TO BE RECEIVED UNTIL 70 YEARS OF AGE.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.							
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.				
18	29.6763	=	29	13	6	31.3290	=	31	6	7	28.6896	=	28	14	0	29.1123	=	29	2	3
19	30.0651	=	30	1	4	31.6460	=	31	12	11	28.9289	=	28	18	7	29.6750	=	29	13	6
20	30.3915	=	30	7	10	31.9803	=	31	19	7	29.2474	=	29	4	11	30.6817	=	30	13	8
21	30.7214	=	30	14	5	32.3327	=	32	6	8	29.5141	=	29	10	3	31.0973	=	31	1	11
22	31.0447	=	31	0	11	32.7018	=	32	14	0	29.7965	=	29	15	11	31.4506	=	31	9	0
23	31.3653	=	31	7	4	33.0829	=	33	1	8	30.1013	=	30	2	0	31.8124	=	31	16	3
24	31.6748	=	31	13	6	33.4866	=	33	9	9	30.4261	=	30	8	6	32.9337	=	32	18	8
25	31.9996	=	32	0	0	33.8931	=	33	17	10	30.7738	=	30	15	6	33.3450	=	33	6	11
26	32.3312	=	32	6	7	34.3287	=	34	6	7	31.1498	=	31	3	0	33.7722	=	33	15	5
27	32.6718	=	32	13	5	34.6808	=	34	13	7	31.5502	=	31	11	0	34.2169	=	34	4	4
28	33.0224	=	33	0	5	35.1454	=	35	2	11	31.9742	=	31	19	6	34.6784	=	34	13	7
29	33.3711	=	33	7	5	35.5963	=	35	11	11	32.4188	=	32	8	4	35.1569	=	35	3	2
30	33.7410	=	33	14	10	36.0944	=	36	1	11	32.8809	=	32	17	7	35.6496	=	35	13	0
31	34.1170	=	34	2	4	36.6112	=	36	12	3	33.3551	=	33	7	1	36.1960	=	36	3	11
32	34.4990	=	34	10	0	37.1467	=	37	2	11	33.8438	=	33	16	10	36.6762	=	36	13	7
33	34.8848	=	34	17	8	37.6956	=	37	13	11	34.3349	=	34	6	8	37.2063	=	37	4	1
34	35.2734	=	35	5	6	38.2361	=	38	4	9	34.8327	=	34	16	8	37.7293	=	37	14	7
35	35.7120	=	35	14	3	38.7953	=	38	15	11	35.3371	=	35	6	9	38.2717	=	38	5	5
36	36.0455	=	36	0	11	39.3793	=	39	7	7	35.8441	=	35	16	11	38.8171	=	38	16	4
37	36.4288	=	36	8	7	39.9564	=	39	19	1	36.3509	=	36	7	0	39.3603	=	39	7	2
38	36.8135	=	36	16	3	40.5010	=	40	10	0	36.8449	=	36	16	11	39.9930	=	40	0	0
39	37.1991	=	37	4	0	41.0692	=	41	1	5	37.3502	=	37	7	0	40.5348	=	40	10	8
40	38.1052	=	38	2	1	41.6462	=	41	12	11	37.8452	=	37	16	11	41.0696	=	41	1	5
41	38.5133	=	38	10	3	42.0269	=	42	0	6	39.3686	=	39	7	4	41.5949	=	41	11	11
42	38.9217	=	38	18	5	42.7497	=	42	14	11	39.8733	=	39	17	6	42.1251	=	42	2	6
43	39.3222	=	39	6	5	43.2546	=	43	5	1	40.3718	=	40	7	5	42.5375	=	42	10	9
44	39.7043	=	39	14	1	43.7237	=	43	14	6	40.8783	=	40	17	7	43.0226	=	43	0	5
45	40.0597	=	40	1	2	44.1578	=	44	3	2	41.4065	=	41	8	2	43.5511	=	43	11	0
46	40.3798	=	40	7	7	44.5780	=	44	11	7	41.9720	=	41	19	5	44.1041	=	44	2	1
47	40.6570	=	40	13	2	44.8828	=	44	17	8	42.5695	=	42	11	7	44.4365	=	44	8	9
48	40.8827	=	40	17	8	45.2766	=	45	5	6	43.2013	=	43	4	0	44.8425	=	44	16	10
49	41.0479	=	41	0	11	45.6403	=	45	12	10	43.8053	=	43	16	1	45.2074	=	45	4	2
50	41.1224	=	41	2	5	45.9742	=	45	19	6	44.3791	=	44	7	7	45.5242	=	45	10	6
51	41.1171	=	41	2	4	46.2926	=	46	5	10	44.7975	=	44	15	11	45.7817	=	45	15	8
52	40.0502	=	40	1	0	46.5426	=	46	10	10	45.2588	=	45	5	2	45.9897	=	45	19	9
53	39.8829	=	39	17	8	46.7239	=	46	14	6	45.3588	=	45	7	2	46.0960	=	46	1	11
54	39.5647	=	39	11	4	46.8117	=	46	16	3	45.2962	=	45	5	11	46.0491	=	46	1	0
55	39.1312	=	39	2	7	46.7801	=	46	15	7	45.0691	=	45	1	5	45.9792	=	45	19	7
56	38.6519	=	38	13	1	46.6014	=	46	12	0	44.6765	=	44	13	6	45.3739	=	45	7	6
57	37.9125	=	37	18	3	46.2192	=	46	4	4	44.0124	=	44	0	3	44.9587	=	44	19	2
58	37.5848	=	37	11	8	45.6476	=	45	12	11	43.2724	=	43	5	5	44.2659	=	44	5	4
59	36.9105	=	36	18	3	44.8220	=	44	16	5	42.3503	=	42	7	0	43.4139	=	43	8	3
60	35.6772	=	35	13	6	43.7045	=	43	14	1	40.2350	=	40	4	8	42.2727	=	42	5	5
61	34.3452	=	34	6	11	42.4006	=	42	8	0	38.8663	=	38	17	4	40.7843	=	40	15	8
62	32.8202	=	32	16	5	40.4501	=	40	9	0	37.2765	=	37	5	6	38.9167	=	38	18	4
63	30.8990	=	30	18	0	38.1075	=	38	2	2	35.3544	=	35	7	1	36.5843	=	36	11	8
64	28.5694	=	28	11	5	35.2655	=	35	5	4	32.9818	=	32	19	7	33.8034	=	33	16	1
65	25.7310	=	25	14	7	31.7819	=	31	15	8	29.9227	=	29	18	5	30.3448	=	30	6	11

TABLE LVII.

SHOWING THE PRESENT VALUE AT THE GIVEN AGES, FOR AN ANNUITY OF £1 PER ANNUM,
AFTER 70 YEARS OF AGE.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	.7215	=0	14	5	.5497	=0	10	11	.5392	=0	10	9	.5704	=0	11	5
19	.7502	=0	15	0	.5710	=0	11	5	.5594	=0	11	2	.5922	=0	11	10
20	.7816	=0	15	8	.5930	=0	11	10	.5804	=0	11	7	.6156	=0	12	4
21	.8102	=0	16	2	.6157	=0	12	4	.6022	=0	12	1	.6395	=0	12	9
22	.8414	=0	16	10	.6391	=0	12	9	.6250	=0	12	6	.6642	=0	13	3
23	.8733	=0	17	6	.6632	=0	13	3	.6487	=0	12	11	.6896	=0	13	9
24	.9062	=0	18	1	.6882	=0	13	9	.6736	=0	13	6	.7159	=0	14	4
25	.9400	=0	18	9	.7141	=0	14	3	.6996	=0	14	0	.7431	=0	14	10
26	.9753	=0	19	6	.7400	=0	14	10	.7267	=0	14	6	.7714	=0	15	5
27	1.0118	=1	0	2	.7687	=0	15	4	.7550	=0	15	1	.8099	=0	16	2
28	1.0498	=1	1	0	.7976	=0	15	11	.7845	=0	15	8	.8310	=0	16	7
29	1.0893	=1	1	9	.8277	=0	16	6	.8153	=0	16	4	.8625	=0	17	3
30	1.1303	=1	2	7	.8590	=0	17	2	.8474	=0	16	11	.8954	=0	17	11
31	1.1729	=1	3	5	.8916	=0	17	10	.8807	=0	17	7	.9298	=0	18	7
32	1.2171	=1	4	4	.9257	=0	18	6	.9159	=0	18	4	.9653	=0	19	2
33	1.2631	=1	5	3	.9614	=0	19	3	.9525	=0	19	1	1.0023	=1	0	0
34	1.3110	=1	6	3	.9987	=1	0	0	.9908	=0	19	10	1.0415	=1	0	10
35	1.3628	=1	7	3	1.0378	=1	0	9	1.0312	=1	0	7	1.0823	=1	1	8
36	1.4133	=1	8	3	1.0787	=1	1	7	1.0738	=1	1	6	1.1252	=1	2	6
37	1.4677	=1	9	4	1.1220	=1	2	5	1.1189	=1	2	4	1.1707	=1	3	5
38	1.5228	=1	10	5	1.1665	=1	3	4	1.1666	=1	3	4	1.2174	=1	4	4
39	1.5846	=1	11	8	1.2136	=1	4	3	1.2170	=1	4	4	1.2671	=1	5	4
40	1.6468	=1	12	11	1.2632	=1	5	3	1.2703	=1	5	5	1.3192	=1	6	5
41	1.7116	=1	14	3	1.3095	=1	6	2	1.3263	=1	6	6	1.3739	=1	7	6
42	1.7789	=1	15	7	1.3699	=1	7	5	1.3856	=1	7	9	1.4313	=1	8	8
43	1.8491	=1	16	11	1.4275	=1	8	7	1.4480	=1	8	11	1.4913	=1	9	10
44	1.9203	=1	18	5	1.4882	=1	9	9	1.5140	=1	10	3	1.5549	=1	11	1
45	1.9993	=2	0	0	1.5523	=1	11	1	1.5839	=1	11	6	1.6219	=1	12	5
46	2.0799	=2	1	7	1.6200	=1	12	5	1.6581	=1	13	2	1.6967	=1	13	11
47	2.1647	=2	3	3	1.6917	=1	13	10	1.7369	=1	14	9	1.7679	=1	15	4
48	2.2542	=2	5	1	1.7681	=1	15	4	1.8210	=1	16	5	1.8473	=1	16	11
49	2.3485	=2	6	11	1.8447	=1	16	11	1.9110	=1	18	3	1.9319	=1	18	8
50	2.4483	=2	8	11	1.9349	=1	18	8	2.0073	=2	0	2	2.0220	=2	0	5
51	2.5540	=2	11	1	2.0264	=2	0	6	2.1109	=2	2	0	2.1180	=2	2	4
52	2.6659	=2	13	4	2.1240	=2	2	6	2.2225	=2	4	5	2.2211	=2	4	5
53	2.7846	=2	15	8	2.2285	=2	4	7	2.3431	=2	6	10	2.3311	=2	6	7
54	2.9101	=2	18	2	2.3405	=2	6	10	2.4742	=2	9	6	2.4466	=2	8	11
55	3.0436	=3	0	10	2.4612	=2	9	3	2.6172	=2	12	4	2.5768	=2	11	6
56	3.1851	=3	3	8	2.5915	=2	11	10	2.7738	=2	15	0	2.7139	=2	14	3
57	3.2581	=3	5	2	2.7328	=2	14	8	2.9460	=2	18	6	2.8651	=2	17	4
58	3.5496	=3	11	0	2.8867	=2	17	9	3.1433	=3	2	10	3.0302	=3	0	7
59	3.6691	=3	13	5	3.0552	=3	1	1	3.3463	=3	6	11	3.2115	=3	4	3
60	3.8626	=3	17	3	3.2404	=3	4	10	3.5796	=3	11	7	3.4117	=3	8	3
61	4.0753	=4	1	6	3.4453	=3	8	11	3.8313	=3	16	8	3.6323	=3	12	8
62	4.3129	=4	6	3	3.6697	=3	13	5	4.1109	=4	2	3	3.8341	=3	16	8
63	4.5788	=4	11	7	3.9235	=3	18	6	4.4551	=4	9	1	4.1523	=4	3	1
64	4.8701	=4	17	5	4.2123	=4	4	3	4.8210	=4	16	5	4.4584	=4	9	2
65	5.1896	=5	3	9	4.5338	=4	10	8	5.2334	=5	4	8	4.8019	=4	16	0

TABLE LVIII.

SHOWING THE AMOUNT TO BE PAID IN ONE SUM AT ANY OF THE AGES GIVEN, TO ASSURE
£1 AT DEATH.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	.3138=	0	6	3	.3300=	0	6	7½	.3437=	0	6	10½	.3276=	0	6	6½
19	.3169=	0	6	4	.3321=	0	6	8	.3502=	0	7	0	.3317=	0	6	7½
20	.3202=	0	6	5	.3375=	0	6	9	.3560=	0	7	1½	.3360=	0	6	8½
21	.3247=	0	6	6	.3423=	0	6	10	.3620=	0	7	3	.3405=	0	6	9½
22	.3289=	0	6	7	.3476=	0	6	11½	.3681=	0	7	4½	.3453=	0	6	11
23	.3333=	0	6	8	.3536=	0	7	1	.3743=	0	7	6	.3505=	0	7	0
24	.3380=	0	6	9	.3590=	0	7	2	.3806=	0	7	7½	.3559=	0	7	1½
25	.3434=	0	6	10½	.3661=	0	7	4	.3870=	0	7	9	.3618=	0	7	3
26	.3491=	0	7	0	.3716=	0	7	5	.3934=	0	7	10½	.3677=	0	7	4
27	.3549=	0	7	1	.3783=	0	7	7	.4001=	0	8	0	.3739=	0	7	6
28	.3609=	0	7	2½	.3851=	0	7	8½	.4069=	0	8	2	.3805=	0	7	7½
29	.3666=	0	7	4	.3927=	0	7	10	.4139=	0	8	3½	.3871=	0	7	9
30	.3738=	0	7	6	.3990=	0	8	0	.4212=	0	8	5	.3966=	0	7	11
31	.3814=	0	7	7½	.4073=	0	8	1½	.4286=	0	8	7	.4051=	0	8	1
32	.3873=	0	7	9	.4149=	0	8	2½	.4361=	0	8	9	.4131=	0	8	3
33	.3940=	0	7	10½	.4226=	0	8	5½	.4439=	0	8	10½	.4207=	0	8	5
34	.4017=	0	8	0½	.4304=	0	8	7½	.4518=	0	9	0½	.4285=	0	8	7
35	.4083=	0	8	2	.4380=	0	8	9	.4598=	0	9	2½	.4363=	0	8	9
36	.4166=	0	8	4	.4466=	0	8	11	.4690=	0	9	4½	.4443=	0	8	10½
37	.4244=	0	8	6	.4546=	0	9	1	.4746=	0	9	6	.4524=	0	9	0½
38	.4321=	0	8	8	.4633=	0	9	3	.4830=	0	9	8	.4625=	0	9	3
39	.4403=	0	8	9½	.4719=	0	9	5	.4909=	0	9	10	.4689=	0	9	4½
40	.4485=	0	8	11½	.4807=	0	9	7½	.4990=	0	10	0	.4773=	0	9	6½
41	.4566=	0	9	1½	.4918=	0	9	10	.5073=	0	10	2	.4859=	0	9	8½
42	.4661=	0	9	4	.4989=	0	10	0	.5167=	0	10	4	.4949=	0	9	11
43	.4752=	0	9	6	.5082=	0	10	2	.5244=	0	10	6	.5041=	0	10	1
44	.4847=	0	9	8½	.5165=	0	10	4	.5332=	0	10	8	.5137=	0	10	3
45	.4944=	0	9	10½	.5253=	0	10	6	.5420=	0	10	10	.5233=	0	10	5½
46	.5043=	0	10	1	.5358=	0	10	8½	.5511=	0	11	0	.5312=	0	10	7½
47	.5144=	0	10	3½	.5458=	0	10	11	.5607=	0	11	2½	.5425=	0	10	10
48	.5247=	0	10	6	.5544=	0	11	1	.5708=	0	11	5	.5524=	0	11	0½
49	.5349=	0	10	8½	.5661=	0	11	4	.5788=	0	11	7	.5623=	0	11	3
50	.5460=	0	10	11	.5761=	0	11	6	.5872=	0	11	9	.5724=	0	11	5½
51	.5571=	0	11	2	.5866=	0	11	8½	.5966=	0	11	11	.5832=	0	11	8
52	.5676=	0	11	4	.5974=	0	11	11½	.6059=	0	12	1½	.5929=	0	11	10½
53	.5787=	0	11	7	.6080=	0	12	2	.6156=	0	12	3½	.6013=	0	12	0½
54	.5902=	0	11	9½	.6179=	0	12	4½	.6248=	0	12	6	.6123=	0	12	3
55	.6018=	0	12	0½	.6263=	0	12	6½	.6340=	0	12	8	.6233=	0	12	5½
56	.6138=	0	12	3½	.6372=	0	12	9	.6424=	0	12	10	.6341=	0	12	8½
57	.6261=	0	12	6½	.6481=	0	12	11½	.6520=	0	13	0½	.6443=	0	12	10½
58	.6331=	0	12	8	.6589=	0	13	2	.6605=	0	13	2½	.6562=	0	13	1½
59	.6425=	0	12	10½	.6700=	0	13	5	.6688=	0	13	4½	.6664=	0	13	4
60	.6545=	0	13	1	.6822=	0	13	8½	.6769=	0	13	6½	.6766=	0	13	6½
61	.6662=	0	13	4	.6910=	0	13	10	.6847=	0	13	8½	.6864=	0	13	8½
62	.6775=	0	13	6½	.7025=	0	14	0½	.6922=	0	13	10	.6962=	0	13	11
63	.6880=	0	13	9	.7127=	0	14	3	.6994=	0	14	0	.7060=	0	14	1½
64	.6985=	0	14	0	.7229=	0	14	5½	.7062=	0	14	1½	.7156=	0	14	3½
65	.7098=	0	14	2½	.7331=	0	14	8	.7127=	0	14	3	.7250=	0	14	6
66	.7213=	0	14	5	.7431=	0	14	10½	.7207=	0	14	5	.7343=	0	14	8½
67	.7335=	0	14	8	.7529=	0	15	0½	.7276=	0	14	6½	.7419=	0	14	10
68	.7456=	0	14	11	.7625=	0	15	3	.7324=	0	14	8	.7527=	0	15	0½
69	.7578=	0	15	2	.7719=	0	15	5½	.7383=	0	14	9½	.7616=	0	15	3
70	.7688=	0	15	4½	.7804=	0	15	7½	.7448=	0	14	11	.7707=	0	15	5

TABLE LIX.

SHOWING THE ANNUAL PREMIUM, PAYABLE QUARTERLY, FOR A SICK GIFT OF £1 PER WEEK UP TO AGE 70, BOTH THE PAYMENT OF SICK GIFT AND CONTRIBUTION THEN TO CEASE.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	1.3273	=1	6	6½	1.4158	=1	8	3½	1.2964	=1	5	11	1.3180	=1	6	4½
19	1.3434	=1	6	10½	1.4411	=1	8	10	1.3172	=1	6	4	1.3564	=1	7	1½
20	1.3701	=1	7	5	1.4681	=1	9	4½	1.3895	=1	6	9½	1.4069	=1	8	1½
21	1.3947	=1	7	10½	1.4972	=1	9	11½	1.3667	=1	7	4	1.4378	=1	8	9
22	1.4208	=1	8	5	1.5286	=1	10	7	1.3928	=1	7	10½	1.4671	=1	9	4
23	1.4484	=1	8	11½	1.5557	=1	11	1½	1.4154	=1	8	3½	1.4981	=1	9	11½
24	1.4774	=1	9	6½	1.5992	=1	12	0	1.4530	=1	9	0½	1.5667	=1	11	4
25	1.5075	=1	10	1½	1.6362	=1	12	8½	1.4856	=1	9	8½	1.6034	=1	12	0½
26	1.5398	=1	10	9½	1.6721	=1	13	5½	1.5208	=1	10	5	1.6425	=1	12	10½
27	1.5738	=1	11	5½	1.7160	=1	14	4	1.5611	=1	11	2½	1.6848	=1	13	8½
28	1.6066	=1	12	1½	1.7620	=1	15	3	1.6030	=1	12	0½	1.7282	=1	14	6½
29	1.6477	=1	12	11½	1.8107	=1	16	2½	1.6491	=1	12	11½	1.7757	=1	15	6½
30	1.6798	=1	13	7	1.8625	=1	17	3	1.6967	=1	13	11	1.8374	=1	16	9
31	1.7299	=1	14	7½	1.9277	=1	18	6½	1.7563	=1	15	1½	1.8932	=1	17	10½
32	1.7704	=1	15	5	1.9760	=1	19	6½	1.8003	=1	16	0	1.9501	=1	19	0
33	1.8214	=1	16	5½	2.0369	=2	0	9	1.8550	=1	17	1½	2.0054	=2	0	1½
34	1.8707	=1	17	5	2.0891	=2	1	9½	1.9031	=1	18	0½	2.0725	=2	1	5½
35	1.9224	=1	18	5½	2.1698	=2	3	4½	1.9764	=1	19	6½	2.1388	=2	2	9½
36	1.9760	=1	19	6½	2.2414	=2	4	10	2.0401	=2	0	9½	2.2083	=2	4	2
37	2.0328	=2	0	8	2.3163	=2	6	4	2.1073	=2	2	1½	2.2810	=2	5	7½
38	2.0923	=2	1	10½	2.3968	=2	7	11½	2.1803	=2	3	7½	2.3573	=2	7	1½
39	2.1556	=2	3	1½	2.4806	=2	9	7½	2.2560	=2	5	1½	2.4429	=2	8	10½
40	2.2415	=2	4	10	2.5757	=2	11	6	2.3353	=2	6	8½	2.5275	=2	10	6½
41	2.3270	=2	6	6½	2.6637	=2	13	3½	2.4952	=2	9	11	2.6166	=2	12	4
42	2.4059	=2	8	1½	2.7622	=2	15	3	2.5764	=2	11	6½	2.7117	=2	14	2½
43	2.4899	=2	9	9½	2.8665	=2	17	4	2.6754	=2	13	6	2.8064	=2	16	1½
44	2.5789	=2	11	7	2.9437	=2	18	10½	2.7521	=2	15	0½	2.9136	=2	18	3½
45	2.6916	=2	13	10	3.0818	=3	1	7½	2.8831	=2	17	8	3.0310	=3	0	7½
46	2.7729	=2	15	5½	3.1980	=3	3	10½	3.0063	=3	0	1½	3.1500	=3	3	0
47	2.8772	=2	17	6½	3.3130	=3	6	3	3.1421	=3	2	10	3.2766	=3	5	6½
48	2.9864	=2	19	8½	3.4014	=3	8	0	3.2455	=3	4	11	3.4115	=3	8	2½
49	3.1004	=3	2	0	3.5927	=3	11	10½	3.4482	=3	8	11½	3.5548	=3	11	1½
50	3.2220	=3	4	5½	3.7482	=3	14	11½	3.6181	=3	12	4½	3.7068	=3	14	1½
51	3.3491	=3	6	11½	3.9174	=3	18	4½	3.7891	=3	15	9½	3.8770	=3	17	6½
52	3.4790	=3	9	7	4.0993	=4	1	11½	3.9678	=3	19	4½	4.0403	=4	0	9½
53	3.5392	=3	10	9½	4.2938	=4	5	10½	4.1684	=4	3	4½	4.2008	=4	4	0
54	3.6176	=3	12	4½	4.4888	=4	9	9½	4.3435	=4	6	10½	4.3813	=4	7	7½
55	3.8176	=3	16	4½	4.6676	=4	13	4½	4.4968	=4	9	11½	4.5097	=4	10	2½
56	3.9855	=3	19	8½	4.9063	=4	18	1½	4.7037	=4	14	1	4.8197	=4	16	4½
57	4.1188	=4	2	4½	5.1884	=5	2	9½	4.8931	=4	17	10½	5.0112	=5	0	2½
58	4.2746	=4	5	6	5.3851	=5	6	8½	5.1048	=5	2	2½	5.2706	=5	5	5
59	4.4139	=4	8	8½	5.7209	=5	14	5	5.4054	=5	8	1½	5.5231	=5	10	5½

TABLE LX.

SHOWING THE ANNUAL PREMIUM, PAYABLE QUARTERLY, UNTIL AGE 70, FOR AN ANNUITY OF £1 PER ANNUM, AFTER THAT AGE: THE PAYMENT OF CONTRIBUTION THEN CEASING.—
INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	.03212=	0	7 $\frac{3}{4}$		.02484=	0	6		.02497=	0	6		.02581=	0	6 $\frac{1}{2}$	
19	.03360=	0	8		.02600=	0	6 $\frac{1}{2}$		.02617=	0	6 $\frac{1}{2}$		.02693=	0	6 $\frac{1}{2}$	
20	.03523=	0	8 $\frac{1}{2}$		.02723=	0	6 $\frac{1}{2}$		.02718=	0	6 $\frac{1}{2}$		.02823=	0	6 $\frac{1}{2}$	
21	.03678=	0	8 $\frac{3}{4}$		.02852=	0	6 $\frac{3}{4}$		.02878=	0	7		.02957=	0	7	
22	.03851=	0	9 $\frac{1}{4}$		.02988=	0	7 $\frac{1}{4}$		.03020=	0	7 $\frac{1}{4}$		.03098=	0	7 $\frac{1}{4}$	
23	.04032=	0	9 $\frac{3}{4}$		.03120=	0	7 $\frac{3}{4}$		.03171=	0	7 $\frac{3}{4}$		.03247=	0	7 $\frac{3}{4}$	
24	.04225=	0	10 $\frac{1}{4}$		.03291=	0	8		.03334=	0	8		.03406=	0	8 $\frac{1}{2}$	
25	.04429=	0	10 $\frac{3}{4}$		.03441=	0	8 $\frac{1}{2}$		.03503=	0	8 $\frac{1}{2}$		.03573=	0	8 $\frac{3}{4}$	
26	.04645=	0	11 $\frac{1}{4}$		.03622=	0	8 $\frac{3}{4}$		.03685=	0	8 $\frac{3}{4}$		.03751=	0	9	
27	.04874=	0	11 $\frac{3}{4}$		.03805=	0	9 $\frac{1}{4}$		.03879=	0	9 $\frac{1}{4}$		.03942=	0	9 $\frac{1}{4}$	
28	.05107=	1	0 $\frac{1}{2}$		.04001=	0	9 $\frac{3}{4}$		.04075=	0	9 $\frac{3}{4}$		.04094=	0	9 $\frac{3}{4}$	
29	.05378=	1	1		.04202=	0	10		.04317=	0	10 $\frac{1}{2}$		.04356=	0	10 $\frac{1}{2}$	
30	.05625=	1	1 $\frac{1}{2}$		.04425=	0	10 $\frac{1}{2}$		.04544=	0	11		.04631=	0	11 $\frac{1}{2}$	
31	.05947=	1	2 $\frac{1}{4}$		.04673=	0	11 $\frac{1}{4}$		.04797=	0	11 $\frac{1}{4}$		.04867=	0	11 $\frac{1}{4}$	
32	.06260=	1	3		.04927=	0	11 $\frac{3}{4}$		.05069=	1	0 $\frac{1}{2}$		.05132=	1	0 $\frac{1}{2}$	
33	.06595=	1	3 $\frac{3}{4}$		.05200=	1	0 $\frac{3}{4}$		.05368=	1	1		.05416=	1	1	
34	.06953=	1	4 $\frac{3}{4}$		.05531=	1	1 $\frac{1}{2}$		.05677=	1	1 $\frac{1}{2}$		.05721=	1	1 $\frac{3}{4}$	
35	.07336=	1	5 $\frac{1}{2}$		.05808=	1	2		.06019=	1	2 $\frac{1}{2}$		.06048=	1	2 $\frac{3}{4}$	
36	.07748=	1	6 $\frac{1}{4}$		.06147=	1	2 $\frac{3}{4}$		.06384=	1	3 $\frac{1}{4}$		.06401=	1	3 $\frac{1}{4}$	
37	.08190=	1	7 $\frac{1}{2}$		.06513=	1	3 $\frac{1}{2}$		.06764=	1	4 $\frac{1}{2}$		.06784=	1	4 $\frac{1}{2}$	
38	.08775=	1	9		.06909=	1	4 $\frac{3}{4}$		.07195=	1	5 $\frac{1}{2}$		.07192=	1	5 $\frac{1}{2}$	
39	.09182=	1	10		.07337=	1	5 $\frac{1}{2}$		.07695=	1	6 $\frac{1}{2}$		.07686=	1	6 $\frac{1}{2}$	
40	.09687=	1	11 $\frac{1}{4}$		.07802=	1	6 $\frac{1}{4}$		.08193=	1	7 $\frac{1}{4}$		.08119=	1	7 $\frac{1}{4}$	
41	.10582=	2	1 $\frac{1}{4}$		.08308=	1	8		.08718=	1	9		.08643=	1	8 $\frac{3}{4}$	
42	.10996=	2	2 $\frac{1}{4}$		.08862=	1	9 $\frac{1}{4}$		.09321=	1	10 $\frac{1}{4}$		.09213=	1	10	
43	.11709=	2	4		.09464=	1	10 $\frac{3}{4}$		.09983=	2	0		.09615=	1	11	
44	.12189=	2	5 $\frac{1}{2}$		.10099=	2	0 $\frac{1}{2}$		.10709=	2	1 $\frac{3}{4}$		.10530=	2	1 $\frac{1}{2}$	
45	.13433=	2	8 $\frac{1}{4}$		.10821=	2	2		.11509=	2	3 $\frac{1}{4}$		.11313=	2	3 $\frac{1}{4}$	
46	.14283=	2	10 $\frac{1}{4}$		.11382=	2	3 $\frac{1}{2}$		.12389=	2	5 $\frac{3}{4}$		.12118=	2	5	
47	.15319=	3	0 $\frac{3}{4}$		.12506=	2	6		.13378=	2	8		.13036=	2	7 $\frac{1}{2}$	
48	.16467=	3	3 $\frac{1}{4}$		.13487=	2	8 $\frac{1}{4}$		.14474=	2	10 $\frac{3}{4}$		.14054=	2	9 $\frac{3}{4}$	
49	.17751=	3	6 $\frac{1}{2}$		.14576=	2	11		.15609=	3	1 $\frac{1}{2}$		.15192=	3	0 $\frac{1}{2}$	
50	.19183=	3	10		.15806=	3	2		.17030=	3	5		.16464=	3	3 $\frac{1}{2}$	
51	.20803=	4	2		.17186=	3	5 $\frac{1}{2}$		.18577=	3	8 $\frac{1}{2}$		.17938=	3	7	
52	.22274=	4	5 $\frac{1}{4}$		.18749=	3	6 $\frac{1}{2}$		.20333=	4	0 $\frac{3}{4}$		.19516=	3	10 $\frac{3}{4}$	
53	.24637=	4	11		.20530=	4	1 $\frac{1}{4}$		.22361=	4	5 $\frac{1}{4}$		.21244=	4	3	
54	.26603=	5	4		.22504=	4	6		.24726=	4	11 $\frac{1}{4}$		.23332=	4	8	
55	.29694=	5	11 $\frac{1}{4}$		.24630=	4	11		.27340=	5	10 $\frac{1}{4}$		.25291=	5	0 $\frac{1}{2}$	
56	.32847=	6	6 $\frac{3}{4}$		.27283=	5	5 $\frac{1}{2}$		.30338=	6	0 $\frac{3}{4}$		.28564=	5	8 $\frac{1}{2}$	
57	.37061=	7	5		.30459=	6	1		.34151=	6	10		.31943=	6	4 $\frac{1}{2}$	
58	.40933=	8	2 $\frac{1}{4}$		.34195=	6	10		.39611=	7	11		.36081=	7	2 $\frac{1}{2}$	
59	.44590=	8	11		.38683=	7	8 $\frac{3}{4}$		.43763=	8	9		.40764=	8	2	
60	.50662=	10	1 $\frac{1}{2}$		.44147=	8	10		.50186=	10	0 $\frac{1}{2}$		.46641=	9	4	

TABLE LXI.

SHOWING THE ANNUAL PREMIUM, PAYABLE QUARTERLY, DURING LIFE, TO ASSURE THE SUM OF £1 AT DEATH.—INTEREST, THREE PER CENT.

Age.	Rural.				Town.				City.				Rural, Town, and City.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	.01354	=0	0	3 $\frac{1}{2}$	.01450	=0	0	3 $\frac{1}{2}$	.01553	=0	0	3 $\frac{3}{4}$	.01443	=0	0	3 $\frac{1}{2}$
19	.01373	=0	0	3 $\frac{1}{2}$	.01474	=0	0	3 $\frac{1}{2}$	.01596	=0	0	3 $\frac{3}{4}$	.01469	=0	0	3 $\frac{1}{2}$
20	.01397	=0	0	3 $\frac{1}{2}$	.01509	=0	0	3 $\frac{3}{4}$	.01638	=0	0	4	.01498	=0	0	3 $\frac{1}{2}$
21	.01418	=0	0	3 $\frac{1}{2}$	.01542	=0	0	3 $\frac{3}{4}$	.01681	=0	0	4	.01529	=0	0	3 $\frac{3}{4}$
22	.01449	=0	0	3 $\frac{1}{2}$	.01578	=0	0	3 $\frac{3}{4}$	.01727	=0	0	4 $\frac{1}{2}$	.01562	=0	0	3 $\frac{3}{4}$
23	.01479	=0	0	3 $\frac{3}{4}$	.01606	=0	0	3 $\frac{3}{4}$	.01773	=0	0	4 $\frac{1}{2}$	.01598	=0	0	3 $\frac{3}{4}$
24	.01512	=0	0	3 $\frac{3}{4}$	.01660	=0	0	4	.01822	=0	0	4 $\frac{1}{2}$	.01637	=0	0	4
25	.01549	=0	0	3 $\frac{3}{4}$	.01709	=0	0	4	.01872	=0	0	4 $\frac{1}{2}$	.01679	=0	0	4
26	.01596	=0	0	3 $\frac{3}{4}$	.01749	=0	0	4 $\frac{1}{2}$	.01924	=0	0	4 $\frac{1}{2}$	.01723	=0	0	4 $\frac{1}{2}$
27	.01630	=0	0	4	.01804	=0	0	4 $\frac{1}{2}$	.01979	=0	0	4 $\frac{3}{4}$	.01770	=0	0	4 $\frac{1}{2}$
28	.01674	=0	0	4	.01857	=0	0	4 $\frac{3}{4}$	.02036	=0	0	5	.01820	=0	0	4 $\frac{1}{2}$
29	.01717	=0	0	4	.01917	=0	0	4 $\frac{3}{4}$	.02096	=0	0	5	.01873	=0	0	4 $\frac{3}{4}$
30	.01770	=0	0	4 $\frac{1}{2}$	.01972	=0	0	4 $\frac{3}{4}$	.02160	=0	0	5 $\frac{1}{2}$	.01951	=0	0	4 $\frac{3}{4}$
31	.01830	=0	0	4 $\frac{1}{2}$	.02039	=0	0	5	.02227	=0	0	5 $\frac{3}{4}$	.02020	=0	0	4 $\frac{3}{4}$
32	.01875	=0	0	4 $\frac{1}{2}$	.02114	=0	0	5	.02297	=0	0	5 $\frac{3}{4}$	.02089	=0	0	5
33	.01932	=0	0	4 $\frac{3}{4}$	.02173	=0	0	5 $\frac{1}{2}$	.02372	=0	0	5 $\frac{3}{4}$	.02156	=0	0	5 $\frac{1}{2}$
34	.01991	=0	0	4 $\frac{3}{4}$	.02244	=0	0	5 $\frac{1}{2}$	.02450	=0	0	6	.02226	=0	0	5 $\frac{1}{2}$
35	.02047	=0	0	5	.02329	=0	0	5 $\frac{1}{2}$	.02531	=0	0	6	.02299	=0	0	5 $\frac{1}{2}$
36	.02120	=0	0	5	.02397	=0	0	5 $\frac{3}{4}$	.02621	=0	0	6 $\frac{1}{2}$	.02376	=0	0	5 $\frac{3}{4}$
37	.02194	=0	0	5 $\frac{1}{2}$	.02478	=0	0	6	.02687	=0	0	6 $\frac{1}{2}$	.02455	=0	0	6
38	.02239	=0	0	5 $\frac{1}{2}$	.02566	=0	0	6 $\frac{1}{2}$	.02779	=0	0	6 $\frac{3}{4}$	.02578	=0	0	6 $\frac{1}{2}$
39	.02336	=0	0	5 $\frac{1}{2}$	.02658	=0	0	6 $\frac{1}{2}$	.02870	=0	0	7	.02625	=0	0	6 $\frac{1}{2}$
40	.02417	=0	0	5 $\frac{3}{4}$	.02754	=0	0	6 $\frac{3}{4}$	.02966	=0	0	7 $\frac{1}{2}$	.02717	=0	0	6 $\frac{3}{4}$
41	.02500	=0	0	6	.02881	=0	0	7	.03067	=0	0	7 $\frac{1}{2}$	.02814	=0	0	6 $\frac{3}{4}$
42	.02597	=0	0	6 $\frac{1}{2}$	.02964	=0	0	7 $\frac{1}{2}$	.03180	=0	0	7 $\frac{3}{4}$	.02917	=0	0	7
43	.02678	=0	0	6 $\frac{1}{2}$	.03078	=0	0	7 $\frac{1}{2}$	.03287	=0	0	8	.03028	=0	0	7 $\frac{1}{2}$
44	.02799	=0	0	6 $\frac{3}{4}$	.03183	=0	0	7 $\frac{3}{4}$	.03406	=0	0	8 $\frac{1}{2}$	.03147	=0	0	7 $\frac{3}{4}$
45	.02911	=0	0	7	.03305	=0	0	8	.03532	=0	0	8 $\frac{1}{2}$	.03272	=0	0	7 $\frac{3}{4}$
46	.03030	=0	0	7 $\frac{1}{2}$	.03443	=0	0	8 $\frac{1}{2}$	.03665	=0	0	8 $\frac{3}{4}$	.03385	=0	0	8
47	.03157	=0	0	7 $\frac{1}{2}$	.03586	=0	0	8 $\frac{1}{2}$	.03809	=0	0	9 $\frac{1}{2}$	.03507	=0	0	8 $\frac{1}{2}$
48	.03291	=0	0	8	.03726	=0	0	9	.03963	=0	0	9 $\frac{1}{2}$	.03651	=0	0	8 $\frac{3}{4}$
49	.03432	=0	0	8 $\frac{1}{2}$	.03896	=0	0	9 $\frac{1}{2}$	.04110	=0	0	9 $\frac{3}{4}$	.03838	=0	0	9 $\frac{1}{2}$
50	.03590	=0	0	8 $\frac{3}{4}$	.04064	=0	0	9 $\frac{3}{4}$	.04257	=0	0	10 $\frac{1}{2}$	.04003	=0	0	9 $\frac{3}{4}$
51	.03756	=0	0	9	.04245	=0	0	10 $\frac{1}{2}$	.04427	=0	0	10 $\frac{3}{4}$	.04179	=0	0	10
52	.03922	=0	0	9 $\frac{1}{2}$	.04439	=0	0	10 $\frac{3}{4}$	.04607	=0	0	11	.04359	=0	0	10 $\frac{1}{2}$
53	.04108	=0	0	10	.04647	=0	0	11 $\frac{1}{2}$	.04801	=0	0	11 $\frac{1}{2}$	.04520	=0	0	10 $\frac{3}{4}$
54	.04310	=0	0	10 $\frac{1}{2}$	.04850	=0	0	11 $\frac{3}{4}$	.04997	=0	1	0	.04737	=0	0	11 $\frac{1}{2}$
55	.04527	=0	0	10 $\frac{3}{4}$	.05029	=0	1	0	.05201	=0	1	0 $\frac{1}{2}$	.04963	=0	1	0
56	.04764	=0	0	11 $\frac{1}{2}$	.05299	=0	1	0 $\frac{3}{4}$	.05398	=0	1	1	.05199	=0	1	0 $\frac{1}{2}$
57	.05024	=0	1	0	.05537	=0	1	1 $\frac{1}{2}$	.05634	=0	1	1 $\frac{1}{2}$	.05456	=0	1	1
58	.05180	=0	1	0 $\frac{1}{2}$	.05776	=0	1	2	.05856	=0	1	2	.05728	=0	1	1 $\frac{3}{4}$
59	.05390	=0	1	1	.06117	=0	1	2 $\frac{3}{4}$	.06086	=0	1	2 $\frac{1}{2}$	.06017	=0	1	2 $\frac{3}{4}$
60	.05697	=0	1	1 $\frac{3}{4}$	.06433	=0	1	3 $\frac{1}{2}$	.06317	=0	1	3 $\frac{1}{2}$	.06308	=0	1	3 $\frac{1}{2}$

TABLE LXII.

MORTALITY, WITHOUT MINERS AND COLLIERIES.—RURAL, TOWN, AND CITY DISTRICTS.

Age.	Living.	Dying.	Mortality per cent.	Specific Intensity.	Age.	Living.	Dying.	Mortality per cent.	Specific Intensity.
18	100000	868	.8683	115.16	60	58888	1892	3.2405	30.93
19	99132	844	.8519	117.38	61	56496	1972	3.4917	28.63
20	98288	821	.8354	119.70	62	54524	2047	3.7547	26.63
21	97467	798	.8190	122.10	63	52477	2115	4.0307	24.80
22	96669	735	.7612	131.37	64	50362	2176	4.3203	23.14
23	95934	714	.7444	134.33	65	48186	2226	4.6212	21.63
24	95220	700	.7357	136.01	66	45960	2269	4.9374	20.25
25	94520	695	.7350	136.05	67	43691	2302	5.2710	18.96
26	93825	693	.7384	135.42	68	41389	2327	5.6220	17.78
27	93132	695	.7463	133.99	69	39062	2340	5.9902	16.73
28	92437	701	.7587	131.80	70	36722	2341	6.3759	15.68
29	91736	704	.7671	130.36	71	34381	2325	6.7648	14.78
30	91032	706	.7760	128.86	72	32056	2325	7.2551	13.78
31	90326	709	.7851	127.37	73	29731	2320	7.8047	12.86
32	89617	718	.8008	122.72	74	27411	2310	8.4277	11.86
33	88899	738	.8299	120.49	75	25101	2290	9.1240	10.94
34	88161	756	.8576	116.60	76	22811	2259	9.9036	10.09
35	87405	784	.8969	111.49	77	20552	2224	10.6057	9.24
36	86621	817	.9436	105.97	78	18328	2060	11.2401	8.89
37	85804	846	.9869	101.32	79	16268	1921	11.8092	8.42
38	84950	872	1.0266	97.40	80	14347	1836	12.7978	7.81
39	84086	894	1.0629	94.48	81	12511	1681	13.4336	7.44
40	83192	911	1.0956	91.27	82	10830	1554	14.3744	6.95
41	82281	926	1.1253	88.86	83	9276	1445	15.5802	6.56
42	81355	947	1.1585	85.92	84	7831	1335	17.0509	5.86
43	80408	962	1.1964	83.77	85	6496	1220	18.7867	5.32
44	79446	984	1.2387	80.91	86	5276	1094	20.7474	4.82
45	78462	1008	1.2855	77.75	87	4182	948	22.6797	4.40
46	77454	1035	1.3367	74.81	88	3234	798	24.6690	4.05
47	76419	1066	1.3958	71.64	89	2436	645	26.4857	3.77
48	75353	1103	1.4638	68.31	90	1791	495	28.3024	3.61
49	74250	1143	1.5403	64.92	91	1296	390	30.1191	3.32
50	73107	1188	1.6255	61.52	92	906	289	31.9358	3.13
51	71919	1229	1.7092	58.51	93	617	208	33.7527	2.96
52	70699	1235	1.8276	55.00	94	409	150	36.7621	2.72
53	69405	1354	1.9503	51.24	95	259	103	39.7715	2.57
54	68051	1420	2.0871	47.91	96	156	66	42.7809	2.33
55	66631	1492	2.2395	44.65	97	90	41	45.7903	2.18
56	65139	1567	2.4064	41.56	98	49	24	48.7996	2.04
57	63572	1647	2.5905	38.60	99	25	13	51.7990	1.93
58	61925	1727	2.7901	35.85	100	12	12	100.0000	1.00
59	60198	1810	3.0069	33.25					

TABLE LXIII.

PRESENT VALUE OF AN ANNUITY FOR LIFE; THE VALUE FOR LIFE OF A SICK GIFT OF £1 PER WEEK; THE VALUE OF AN ASSURANCE OF £1 AT DEATH; AND PRESENT VALUE OF AN ANNUITY OF £1 PER ANNUM AFTER 70 YEARS OF AGE.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS, WITHOUT MINERS AND COLLIERIES.—INTEREST, THREE PER CENT.

Age.	Value of Annuity for Life.				Value of Sick Gift.				Value of Assurance at Death.				Value of Annuity after age 70.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	22.0893	=22	1	9	39.2883	=39	5	9	.3244	=0	6	6	.5905	=0	11	9½
19	21.9606	=21	19	2	40.0848	=40	1	8	.3312	=0	6	7½	.6136	=0	12	3½
20	21.8137	=21	16	3	40.8304	=40	16	7	.3355	=0	6	8½	.6375	=0	12	9
21	21.6584	=21	13	2	41.5977	=41	11	11	.3400	=0	6	9½	.6621	=0	13	3
22	21.4923	=21	9	10	42.3858	=42	7	9	.3448	=0	6	10½	.6876	=0	13	9
23	21.3067	=21	6	1	43.1787	=43	3	7	.3502	=0	7	0	.7120	=0	14	3
24	21.1105	=21	2	2	43.9945	=43	19	11	.3560	=0	7	1½	.7406	=0	14	9½
25	20.9049	=20	18	1	44.8377	=44	16	9	.3619	=0	7	3	.7684	=0	15	4½
26	20.6916	=20	13	10	45.7142	=45	14	3	.3682	=0	7	4½	.7974	=0	15	11½
27	20.4710	=20	9	5	46.6268	=46	12	6	.3743	=0	7	6	.8274	=0	16	6½
28	20.2437	=20	4	10	47.5774	=47	11	7	.3812	=0	7	7½	.8587	=0	17	2
29	20.0100	=20	0	2	48.5674	=48	11	4	.3880	=0	7	9	.8912	=0	17	10
30	19.7697	=19	15	6	49.5923	=49	11	10	.3950	=0	7	11	.9293	=0	18	7
31	19.5224	=19	10	5	50.6526	=50	13	1	.4023	=0	8	0½	.9602	=0	19	2½
32	19.2467	=19	4	11	51.7442	=51	14	11	.4109	=0	8	2½	.9968	=0	19	11½
33	18.9843	=18	19	8	52.8767	=52	17	6	.4171	=0	8	4	1.0350	=1	0	8½
34	18.7175	=18	14	4	54.0582	=54	1	2	.4257	=0	8	6	1.0750	=1	1	6
35	18.4658	=18	9	4	55.2914	=55	5	10	.4330	=0	8	8	1.1041	=1	2	1
36	18.1920	=18	3	10	56.5915	=56	11	10	.4410	=0	8	10	1.1581	=1	3	2
37	17.9155	=17	18	4	57.9575	=57	19	2	.4490	=0	8	11½	1.2070	=1	4	1½
38	16.6376	=16	12	9	58.3426	=58	6	10	.4571	=0	9	1½	1.2556	=1	5	1½
39	17.2708	=17	5	5	59.7742	=59	15	6	.4678	=0	9	4½	1.3066	=1	6	2
40	16.9802	=16	19	7	61.2399	=61	4	10	.4763	=0	9	6½	1.3603	=1	7	2½
41	16.6833	=16	13	8	62.7266	=62	14	6	.4849	=0	9	8½	1.4166	=1	4	8
42	16.3794	=16	7	7	64.2217	=64	4	6	.4937	=0	9	10½	1.4757	=1	9	6
43	16.0695	=16	1	5	65.7657	=65	15	4	.5028	=0	10	0½	1.5379	=1	10	9
44	15.7520	=15	15	0	67.2922	=67	5	10	.5120	=0	10	3	1.6032	=1	12	1
45	15.4273	=15	8	7	68.8480	=68	16	10	.5216	=0	10	5	1.6720	=1	13	5½
46	15.0967	=15	1	11	70.3289	=70	6	7	.5311	=0	10	7½	1.7446	=1	14	11
47	14.7602	=14	15	2	71.9526	=71	19	1	.5409	=0	10	10	1.8213	=1	16	5
48	14.4181	=14	8	4½	73.2762	=73	5	6	.5509	=0	11	0	1.9025	=1	18	1
49	14.1060	=14	2	1½	74.9627	=74	19	3	.5600	=0	11	2½	1.9882	=1	19	9½
50	13.7564	=13	15	1½	76.6871	=76	13	9	.5702	=0	11	5	2.0804	=2	1	7½
51	13.4032	=13	8	1	78.4681	=78	9	4	.5804	=0	11	7	2.1782	=2	3	7
52	13.0460	=13	0	11	80.2660	=80	5	4	.5908	=0	11	10	2.2825	=2	5	8
53	12.6862	=12	13	9	82.0930	=82	1	10	.5961	=0	11	11	2.3945	=2	7	10
54	12.3268	=12	6	6	83.9883	=83	19	9	.6118	=0	12	3	2.5154	=2	10	3½
55	11.9672	=11	19	4	85.9115	=85	18	3	.6223	=0	12	5½	2.6461	=2	12	11
56	11.6086	=11	12	2	87.8718	=87	17	5	.6327	=0	12	8	2.7879	=2	15	9
57	11.2516	=11	5	0	89.9035	=89	18	1	.6430	=0	12	10½	2.9424	=2	18	10
58	10.8974	=10	17	11	91.9821	=91	19	8	.6632	=0	13	3	3.1112	=3	2	2½
59	10.5609	=10	11	2	94.0412	=94	0	10	.6733	=0	13	5½	3.2965	=3	5	11
60	10.2148	=10	4	3	96.1569	=96	8	2	.6833	=0	13	8	3.5007	=3	10	0

TABLE LXIV.

ANNUAL PREMIUM PAYABLE BY QUARTERLY INSTALMENTS FOR LIFE, FOR AN ALLOWANCE OF £1 PER WEEK DURING SICKNESS FOR LIFE; THE ANNUAL PREMIUM FOR LIFE FOR AN ASSURANCE OF £1 AT DEATH; AND THE ANNUAL PREMIUM PAYABLE UP TO 70 YEARS OF AGE, FOR AN ANNUITY OF £1 PER ANNUM, PAYABLE MONTHLY, ON ARRIVING AT THAT AGE.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—RURAL, TOWN, AND CITY DISTRICTS, WITHOUT MINERS AND COLLIERS.—INTEREST, THREE PER CENT.

AGE.	ANNUAL PREMIUM PAYABLE.											
	Life for Sick Allowance.				Life for Assurance at Death.				To 70 years of age for Annuity at that age.			
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
18	1.7296	=1	14	7	.01441	=0	0	3 $\frac{1}{2}$	.02669	=0	0	6 $\frac{1}{2}$
19	1.7747	=1	15	6	.01466	=0	0	3 $\frac{1}{2}$	.02789	=0	0	6 $\frac{3}{4}$
20	1.8196	=1	16	4 $\frac{1}{2}$	.01498	=0	0	3 $\frac{1}{2}$	.02995	=0	0	7 $\frac{1}{2}$
21	1.8667	=1	17	4	.01526	=0	0	3 $\frac{3}{4}$	.03062	=0	0	7 $\frac{1}{2}$
22	1.9164	=1	18	4	.01559	=0	0	3 $\frac{3}{4}$	.03208	=0	0	7 $\frac{3}{4}$
23	1.9687	=1	19	4 $\frac{1}{2}$	.01597	=0	0	3 $\frac{3}{4}$	.03355	=0	0	8
24	2.0240	=2	0	6	.01637	=0	0	4	.03527	=0	0	8 $\frac{1}{2}$
25	2.0826	=2	1	8	.01681	=0	0	4	.03701	=0	0	9
26	2.1445	=2	2	10 $\frac{1}{2}$	.01727	=0	0	4 $\frac{1}{2}$	.03895	=0	0	9 $\frac{1}{2}$
27	2.2103	=2	4	2 $\frac{1}{2}$	.01776	=0	0	4 $\frac{1}{2}$	.04073	=0	0	9 $\frac{3}{4}$
28	2.2798	=2	5	7	.01826	=0	0	4 $\frac{1}{2}$	.04291	=0	0	10 $\frac{1}{2}$
29	2.3536	=2	7	1	.01880	=0	0	4 $\frac{3}{4}$	.04524	=0	0	11
30	2.4316	=2	8	7 $\frac{1}{2}$	.01937	=0	0	4 $\frac{3}{4}$	.04751	=0	0	11 $\frac{1}{2}$
31	2.5140	=2	10	3 $\frac{3}{4}$	.01997	=0	0	4 $\frac{3}{4}$	.05004	=0	1	0
32	2.6039	=2	12	1	.02063	=0	0	5	.05281	=0	1	0 $\frac{3}{4}$
33	2.6966	=2	13	11	.02127	=0	0	5	.05570	=0	1	1 $\frac{1}{2}$
34	2.7811	=2	14	7 $\frac{1}{2}$	.02200	=0	0	5 $\frac{1}{2}$	.05885	=0	1	2
35	2.8962	=2	17	11	.02268	=0	0	5 $\frac{1}{2}$	.06138	=0	1	2 $\frac{3}{4}$
36	3.0074	=3	0	2	.02343	=0	0	5 $\frac{3}{4}$	.06558	=0	1	3 $\frac{3}{4}$
37	3.1260	=3	2	6	.02422	=0	0	5 $\frac{3}{4}$	.06963	=0	1	4 $\frac{3}{4}$
38	3.1946	=3	3	10 $\frac{1}{2}$	.02503	=0	0	6	.07387	=0	1	5 $\frac{3}{4}$
39	3.3401	=3	6	9 $\frac{3}{4}$	.02614	=0	0	6 $\frac{1}{2}$	.07876	=0	1	6 $\frac{3}{4}$
40	3.4785	=3	9	7	.02705	=0	0	6 $\frac{1}{2}$	.08374	=0	1	8
41	3.6240	=3	12	6	.02801	=0	0	6 $\frac{3}{4}$	.08914	=0	1	9 $\frac{1}{2}$
42	3.7767	=3	15	6 $\frac{1}{2}$	.02903	=0	0	7	.09448	=0	1	10 $\frac{3}{4}$
43	3.9392	=3	18	9 $\frac{3}{4}$	.03011	=0	0	7 $\frac{1}{2}$	.10154	=0	2	0 $\frac{1}{2}$
44	4.1090	=4	2	2	.03126	=0	0	7 $\frac{1}{2}$	.10852	=0	2	2
45	4.2886	=4	5	9	.03249	=0	0	7 $\frac{3}{4}$	.11635	=0	2	4
46	4.4733	=4	9	5 $\frac{1}{2}$	.03378	=0	0	8	.12482	=0	2	6
47	4.6767	=4	13	6 $\frac{1}{2}$	.03516	=0	0	8 $\frac{1}{2}$	.13427	=0	2	8 $\frac{1}{2}$
48	4.8707	=4	17	5	.03662	=0	0	8 $\frac{3}{4}$	.14482	=0	2	11
49	5.0887	=5	1	9 $\frac{3}{4}$	.03801	=0	0	9	.15619	=0	3	1 $\frac{1}{2}$
50	5.4065	=5	8	1 $\frac{3}{4}$	.03964	=0	0	9 $\frac{1}{2}$	.16912	=0	3	4 $\frac{3}{4}$

VALUATION OF ASSETS AND LIABILITIES.

It is just as necessary that friendly societies should periodically ascertain their position, by a valuation of the assets and liabilities, as it is necessary for a tradesman, to ascertain his position, by taking his stock and annually balancing his accounts.

In ascertaining the value of the assets and liabilities of a friendly society, the most important question is, by what tables shall this be done? because it is very evident that one society has elements contained therein which may not have entered into another society; such as a different combination of trades, difference in locality: the present form has therefore only been given as a guide, and great care should be exercised under what circumstances the same is used.

These tables give the true value from the experience of the Manchester Unity, without any profit thereon; therefore if the lives of any society averaged something near the general average from the experience now given as to trades and localities, it is considered that these tables might be used in preference to any other hitherto given, being the experience of a large number of members of their own society, containing elements perhaps not entering in any data hitherto given, and being void of some elements which may have entered into the tables calculated from other data.

The contribution assumed is graduated according to the benefits and supposed age when the member entered. Taking age 52, it is assumed he entered at age 30, commencing an annual premium of £1 2s. 0d. per annum. The present value of such annual payment by him during life, at his present age, is £14 19s. 3d., and the annual premium payable by the same member, for an assurance of £5 at the death of his wife, is £0 1s. 3½d. The present value of the last-named annual premium for a person, age 52, being £0 17s. 3d., gives the present value of the member's annual payment to the society at £15 16s. 6d. On referring to the liabilities, it is seen that, Firstly, there is a liability on account of the member's wife, the present value of which is £1 15s. 7d. Secondly, liability on account of the member's promised sick allowance, the present value of which is £26 16s. 2d. Thirdly, the present value of an assurance of £10 at death, the present value of which is £5 18s. 7d.

From this valuation it appears that, supposing a member aged 52 was desirous of entering into a society, the same as here given, and contracting to pay the rate of contributions and receive the benefits there stated, the present value of his annual payments, as shown in the preceding paragraph, is £15 16s. 6d., and the present value of his liabilities, as stated above, being £34 10s. 4d., he ought to pay the difference of £18 13s. 10d. to the society, either in one sum or by an equivalent annual payment. Any amount paid less than this, would be a loss of that difference to the society.

Referring to the first age in the table, 18, the present value of the member's contributions payable for a sick allowance, an assurance at death, and an assurance of £5 on the death of his wife, is £20 1s. 11d.; the present value of the member's benefits, £18 19s. 5d.; and the present value of an assurance of £5 on death of wife, £1 2s. 6d.; gives the present value of the member's liabilities, £20 1s. 11d. So that at age 18 the assets and liabilities are equal; and at this age it is sufficient for the member to pay the annual premiums named in the table without any admittance fee whatever.

Take the case of another member, age 35. He is supposed to have joined the society at age 24, paying an annual premium for that age. The present value of such annual

premium, at age 35, is £18 0s. 0d., added to which the present value of the annual premium payable for an assurance at the death of the wife, £1 0s. 6d., gives the total assets, £19 0s. 6d. The present value of this member's sick allowance being £20 1s. 4d., the present value of an assurance of £10 at death, £4 7s. 3d., and the value of an assurance of £5 at the death of wife, £1 7s. 9d., gives the total liabilities for a member of this age, £25 16s. 4d., and leaves a difference between the assets and liabilities of the member amounting to £6 15s. 10d. If the member was now entering the society, contracting to pay the annual premium he is now charged, and to receive the benefits stated, he should pay this sum as an admission fee, or what is equal thereto, by an annual additional payment.

Taking a member at 18. As a member of the society, he has no stake therein, the value of his payments being equal to the value of the benefits allowed. Taking the member at age 35, and the society solvent, his proportionate share of the funds in hand is £6 15s. 10d.; and the proportionate share of the member, age 52, is £18 19s. 5d. These amounts, with sums for the other members, so as to equalise the payments and benefits, should be in hand to cause the society to be in a solvent position.

Assuming that it was intended to commence three separate and distinct friendly societies, one of the societies to commence with members of age 18, another with members of age 35, and the last with members of age 52; and these societies charged to such members the rate of contribution opposite to these ages given in the table, the first society would require no funds; the second society would require a fund of £6 15s. 10d. per member; and the third society would require a fund of £18 19s. 5d. On these positions, each of the societies would be equally solvent, and each in equal position, none of them being possessed of any surplus capital.

If reference be made to Table XII., it will be seen the mean after life-time of a person at age 20 is 41.18 years. On an average, a number of persons of this age would live these years, some living more, some living less. As a person of this age, by living these years would pay an annual premium of £0 17s. 3d., the total amount to be paid by him would be $41.18 \times £0 17s. 3d.$ £35 9s. 3d. In place of making the annual payment, if the member was at once to pay the sum of £19 8s. 11d., and the society could invest this at the rate of 3 per cent. per annum, it would form an equivalent to the annual payment, neither the society nor member being a loser or gainer thereby.

Relative to an assurance on the death of a member, the present value of which is, at age 20, £3 7s. 2d., any society whose experience is similar to the Manchester Unity, providing no profits were contemplated, ought to assure the life of a healthy person for that amount; and whether a person should pay that amount, or an annual payment equal thereto, would be the same to the society.

Having then the present value of the members' annual payments for each year of life and multiplying these sums by the number of members, the assets for each age are ascertained. By adding together the whole, gives the present value of the members' payments for sick allowance and assurance at death; to which amount add the present value of payments for assurance at the death of wife, the capital of the society, and any amount owing, there is obtained the value of all the assets of the society.

Take the present value of the sick allowance and assurance at death of a member, and the present value of an assurance at the death of wife, and to these adding any amount owing by the society, will give the present value of all the society's liabilities, and the balance, the surplus or deficiency in the assets as compared with the liabilities.

TABLE LXV.

VALUATION OF A FRIENDLY SOCIETY, CONSISTING OF 88 MEMBERS, OF THE FOLLOWING AGES, PAYING AN ANNUAL CONTRIBUTION, IN QUARTERLY INSTALLMENTS, OF THE AMOUNT GIVEN IN THE TABLE; AND THE ADDITIONAL ANNUAL PREMIUM FOR AN ASSURANCE ON THE DEATH OF A MEMBER'S WIFE, IF THAT TAKES PLACE PREVIOUS TO THE DEATH OF THE MEMBER. EACH MEMBER TO RECEIVE, WHEN SICK, THE SUM OF TEN SHILLINGS PER WEEK DURING FIRST TWELVE MONTHS, SIX SHILLINGS PER WEEK DURING SECOND TWELVE MONTHS, AND THREE SHILLINGS PER WEEK FOR ANY SICKNESS AFTER A CONTINUED SICKNESS OF TWO YEARS.—SICK GIFT PAYABLE FOR LIFE.—TEN POUNDS AT THE DEATH OF A MEMBER, AND FIVE POUNDS AT THE DEATH OF A MEMBER'S WIFE.—MORTALITY AND SICKNESS.—MANCHESTER UNITY.—INTEREST THREE PER CENT.—PRESENT, CAPITAL, £324 4s. 6d.

ASSETS.										LIABILITIES.																														
No.	Annual Contribution.		Present Value of Annual Contribution.		No. of Members.	Present Value for all Members.		Contri- bution for Wife's Assu- rance.		Present Value of Contri- bution for Assu- rance at Wife's Death.		Present Value for all Wives.		Total Value.		Present Value of Sick Gift, First Twelve Months.		Present Value of Sick Gift, Second Twelve Months.		Present Value of Sick Gift after Two Years.		Total Present Value of Sick Gift.		No. of Members.	Total Value for all Members.		Present Value of Member's Assurance at Death.		No. of Members.	Total Present Value.										
	£	s. d.	£	s. d.		£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.		£	s. d.	£	s. d.		£	s. d.									
18	16	6	18	19	5	2	37	18	10	1	0	1	2	6	1	2	6	13	4	40	19	7	1	10	0	15	13	11	2	31	7	10	3	5	6	2	6	11	0	
19	17	0	19	4	13	5	7	12	31	0	1	2	8	1	1	2	8	13	6	31	0	4	1	11	2	15	17	9	3	47	13	8	3	6	4	3	9	19	0	
20	17	3	19	8	11	4	7	15	8	1	0	1	2	10	2	2	10	13	8	31	1	1	11	12	5	16	1	9	4	64	7	0	3	7	0	3	7	24	13	8
21	17	9	19	14	8	5	9	13	41	0	1	3	1	3	1	3	13	10	11	1	1	11	13	9	16	6	7	5	81	12	11	3	8	15	17	0	5	0		
22	18	0	19	19	10	5	9	9	21	0	1	3	3	3	3	9	13	13	11	2	9	15	0	16	10	10	5	82	4	2	3	9	0	5	17	5	0			
23	18	6	20	5	3	6	12	11	61	0	1	3	7	4	4	4	13	15	4	3	6	16	4	16	15	2	6	100	11	0	3	10	1	6	21	0	6			
24	19	0	20	10	9	3	61	12	31	1	1	3	10	2	7	8	13	17	9	4	2	17	8	16	19	7	3	50	18	9	3	11	2	3	10	13	6			
25	19	3	20	16	6	2	41	13	0	1	1	4	0	1	4	0	14	0	3	1	5	0	1	19	1	17	4	42	34	8	8	3	12	4	2	7	4	8		
26	19	9	21	2	10	5	105	14	21	1	1	4	5	2	2	8	10	14	2	1	1	5	11	2	0	6	17	9	4	5	87	6	8	3	13	6	5	18	7	6

2720	321	9	26	128	15	01	2	1	4	833	14	01	4	993	14	314	5	91	6	82	2	017	14	56	106	6	63	14	9	622	8	6																											
2820	821	15	94	87	3	01	21	1	4	1122	9	10	1	5	122	10	214	8	81	7	62	3	617	19	84	71	18	83	16	1	415	4	4																										
2921	322	2	83	66	6	91	23	1	5	411	5	41	5	611	5	614	11	21	8	52	5	318	4	103	54	14	63	17	53	11	12	8																											
3022	022	9	115	112	9	71	31	1	5	1022	11	81	5	1022	11	814	14	51	9	32	6	1118	10	75	92	12	11	3	19	45	19	16	8																										
3116	616	10	84	66	2	81	0	1	0	083	0	01	6	233	18	614	18	11	10	32	8	718	16	114	75	4	84	1	04	16	4	0																											
3217	016	16	12	33	12	21	0	0	19	910	19	91	6	711	6	715	1	31	11	22	10	419	2	92	38	5	64	2	72	8	5	2																											
3317	917	6	31	17	6	31	01	1	0	1	0	1	15	4	111	12	15	4	111	12	12	12	119	9	11	19	9	14	4	11	4	1	1																										
3417	316	11	116	99	11	61	01	0	19	748	18	41	7	545	9	815	8	81	13	22	14	019	15	106	118	15	0	4	5	86	25	14	0																										
3519	018	0	03	54	0	01	1	1	0	611	0	61	7	911	7	915	12	61	14	32	15	720	2	43	60	7	04	7	83	13	1	9	9																										
3618	016	16	74	67	6	41	01	0	19	321	18	61	8	222	16	415	16	51	15	32	17	620	9	24	81	16	84	8	104	17	15	4	4																										
3719	317	14	82	35	9	41	13	1	0	811	0	81	8	711	8	716	0	101	16	52	19	620	16	92	41	13	64	10	52	9	0	10																											
3819	917	18	43	53	15	01	13	1	0	922	1	61	9	522	18	016	4	91	17	63	1	721	3	103	63	11	64	12	63	13	17	6	3																										
3920	318	1	73	54	4	91	2	1	0	922	1	61	9	522	18	016	9	11	18	83	3	921	11	63	64	14	64	13	98	14	1	3	3																										
4019	316	18	22	33	16	41	13	0	19	910	19	91	9	1011	9	1016	13	41	19	113	5	1121	19	22	43	18	4	4	15	52	9	10	10																										
4219	916	15	02	33	10	01	13	0	19	521	18	10	10	823	1	416	19	82	2	23	13	922	15	72	45	11	24	18	112	9	17	10	10																										
4620	816	4	52	32	8	101	21	0	18	721	17	21	12	823	5	417	17	12	7	74	2	024	6	82	48	18	4	5	6	22	10	12	4																										
5222	014	19	31	14	19	31	31	0	17	310	17	31	15	711	15	718	18	82	17	05	0	1126	16	21	26	16	2	5	18	71	5	18	7																										
881638 6 11										4953 19 4										4964 2 9										881634 19 3																													
Present Value of Payment																														£ s. d.										Present Value of Members' Assurance at Death										£ s. d.									
for an Assurance at 49 | 53 19 4																																																	88 | 348 15 6									
Death of Wife										1634 16 3									
Present Value of Annual																																																	64 2 9									
Payment for Sick and																														1693 6 11																			23 16 3									
Assurance at Death																			
Present Capital																														324 4 6																			£2071 10 9									

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